Expand Your Analytical Horizons

2010 Eastern Analytical Symposium and Exposition

Garden State Exhibit Center
Somerset, New Jersey

November 15-18, 2010

Final Program
While you’re at EAS, come by Booth 224 to see our innovative new products that expand the power and performance of chromatography, increase productivity, reduce solvents, and save money.

See the new ICS-5000 Capillary IC system
- dual pump configuration allows workflows to run two standard, two capillary, or one cap and one standard format column at the same time
- revolutionary IC Cube™ contains all capillary consumables

See the new UltiMate® 3000 UHPLC+ focused systems
- our basic and standard systems now come with UHPLC capabilities
- our new RSLC system comes with expanded UHPLC capabilities
- new detectors and innovative Viper™ fingertight, zero dead volume fittings

Tuesday only!
Visit the Dionex field laboratory in the Davis Room.

Scheduled live demonstrations:
10:00 Ion Chromatography
12:00 UHPLC Lunch ’n Learn Session **
2:00 Charged Aerosol Detectors

**Stop by booth 224 to register for lunch ’n learn session.

Go to www.dionex.com for more information about our new products and solutions.
Welcome to EAS 2010, I hope you are ready to Expand your Analytical Horizons. This year’s conference is once again sure to enhance your knowledge and build your skills to have an immediate impact in your work. We are offering a variety of short courses, seminars, technical sessions and a new workshop format to help each participant make the most of their time spent at EAS.

I’d like to start with a big THANK YOU to all who are contributing to this year’s program. We count on our speakers, instructors and exhibitors to build a conference that is cutting edge, yet grounded in the practice of good science. To complement our typically strong sessions in chromatography, spectroscopy, microscopy and pharmaceutical sciences, we have extended the program to include more novel topics being explored to help the end-user save time and money. We are also continuing to grow in some of the interest areas that were started in recent years including analytical methods in art conservation, forensic science and surface science. It is our intention to deliver the program that you need to further your career PLUS provide you with features that are of interest to you outside of your day-to-day job requirements. I recommend you take a look at the conferences-in-miniature portion on page 6 of this Program. This is a great way to look at sessions and courses that are being offered in a topical area, and should be your first stop to help you make the most of your week at EAS.

This year we are once again recognizing an accomplished list of award winners that are sure to provide very engaging sessions. Award sessions typically offer an extra advantage because they bring current leaders in the field together into the same room to present their research interests in a forum that is positive and well-focused. Topics presented and discussions that occur during these sessions help you bring back innovative ideas that can be applied within your own laboratory research.

I invite you to explore the outstanding exposition. This year, in addition, to all our returning exhibitors, we also have a number of new exhibitors this year. I would like to extend a welcome to all exhibitors and thank you for joining us this year. The exposition is a great way for you, the attendee, to build your skills, find out about the latest innovations, and get answers to your current questions by talking with experts in the technology. This year we will, once again, be offering light lunches in the Exhibit Hall, the return of the highly successful “Technology Tour” that debuted last year, and daily raffles for great prizes. The Exhibit Hall is the easiest and most economical way for your company to explore the latest and greatest technology available.

On behalf of the Governing Board, I would like to thank our sponsors for their generous support which allows us to offer a variety of programs. I would also like to thank you for your participation at EAS! Enjoy all we have to offer and “Expand your Analytical Horizons.”
The Governing Board of EAS would like to thank the following sponsors for their support.

**SPONSORS OF THE 2010 EAS AWARDS PROGRAM**

<table>
<thead>
<tr>
<th>EAS Award for Outstanding Achievements in the Fields of Analytical Chemistry</th>
<th>EAS Award for Outstanding Achievements in Magnetic Resonance</th>
<th>EAS Award for Outstanding Achievements in Mass Spectrometry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bristol-Myers Squibb</td>
<td>Bruker BioSpin New Era Enterprises</td>
<td>Thermo Fisher Scientific Bruker Daltonics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EAS Award for Outstanding Achievements in Near Infrared Spectroscopy</th>
<th>EAS Award for Outstanding Achievements in Separation Science</th>
<th>EAS Award for Outstanding Achievements in Chemometrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOSS NIRS Systems</td>
<td>Agilent Technologies</td>
<td>Eigenvector Research</td>
</tr>
</tbody>
</table>

**EAS Undergraduate Student Awards Program**

Pfizer, Inc.

**Support for the Enhancement of Education**
American Chemical Society - NJ Mass Spectrometry Discussion Group
Bristol-Myers Squibb
Delaware Valley SAS
North Jersey Chromatography Discussion Group
Procter & Gamble
SABIC Innovative Plastics

**Support for the Technical Activities**
Chromatography Forum of Delaware Valley
Covance, Inc.
GE HealthCare
New England Section of the Society for Applied Spectroscopy
New Jersey Association of Forensic Scientists

Corporate Sponsors actively participate in the Eastern Analytical Symposium and Exposition. There are numerous opportunities for corporate sponsorship and co-sponsorship of technical sessions, awards, and other activities at EAS. For more information, please contact the EAS Executive Secretary at askeas@eas.org
**Table of Contents**

Message from the 2010 President .......... 1
Corporate Sponsors ....................... 2
General Information & Schedule ........ 4
Message from the Program Chair ......... 5
Conferences-in-Miniature ............... 6-8
Technical Program ..................... 9-29
Meetings in Conjunction with the 2010 EAS .......... 29
Award Recipients ..................... 31-35
Student Awards ....................... 35
Short Courses ......................... 36-38
Seminars ................................ 39
EAS Workshops ....................... 40
Employment Bureau .................... 41
Exhibitor Product Descriptions ......... 42-56
Highlights in the Exposition Area ...... 56
Special Events .......................... 57-60
EAS Presidents .......................... 61
Previous Award Recipients ............ 62
Author Index .......................... 63-72
Floor Plans of Hotels .................. 73-74
Floor Plan of Exposition Hall .......... 75
Exhibiting Companies .................. 76
2011 EAS Call for Papers ............... Inside

---

The Eastern Analytical Symposium & Exposition is sponsored by the Analytical Division and the North Jersey and New York Sections of the American Chemical Society; the American Microchemical Society; the Chromatography Forum of Delaware Valley; the Coblenz Society; the New York Microscopical Society; and the Delaware Valley, New England, and New York Sections of the Society for Applied Spectroscopy.

Eastern Analytical Symposium & Exposition, Inc. reserves the right, without notice, to modify the material or schedules, as well as to amend the roster of presenters or instructors.
General Information & Schedule

Technical Sessions
All oral technical sessions are held in the Doubletree Hotel, located behind the Garden State Exhibit Center. Poster sessions are held in the Garden State Exhibit Center. Room assignments for the various sessions are located in the Final Program.

Schedule
Oral Technical Sessions
Sunday
No oral sessions
Monday through Thursday
9:00 AM to NOON (Mon-Thurs)
2:00 PM to 5:00 PM (Mon-Wed)
1:00 PM to 4:00 PM (Thurs)

Poster Sessions
Posters are displayed only on the day of the poster session
Sunday
No poster sessions
Monday & Tuesday
Poster Set-Up: 10:00-11:00 AM
Posters on display: 11:00 AM-3:30 PM
Authors Available: NOON-2:00 PM
Posters Removed: 3:30-4:00 PM
Wednesday
Poster Set-Up: 10:00-11:00 AM
Posters on display: 11:00 AM-2:00 PM
Authors Available: NOON-2:00 PM
Posters Removed: 2:00-3:00 PM
Thursday
No poster sessions

Exposition
The Exposition is located in the Garden State Exhibit Center. A floor plan of the Exhibition is provided on page 75 of this Final Program.

Exposition Schedule
Sunday
Open for exhibitor set-up only
Monday, Tuesday & Wednesday
Hours: 9:00 AM to 4:00 PM
Free light lunch: 11:30 AM to 1:00 PM
Thursday
Exposition closed

Employment Bureau
The Employment Bureau is located in the Garden State Exhibit Center at the end of Aisle 600.

Employment Bureau Hours

Monday & Tuesday
9:00 AM to 4:00 PM
Wednesday
9:00 AM to 1:00 PM
Thursday
Employment Bureau closed

EAS Short Courses
EAS Short Courses are held in the Somerset Holiday Inn, located across Davidson Avenue from the Garden State Exhibit Center.

Sunday through Thursday
8:30 AM to 5:00 PM

Seminars
Seminars are held in the Doubletree Hotel, which is located behind the Garden State Exhibit Center.

Sunday
1:00 PM to 4:00 PM
Monday, Tuesday & Wednesday
10:00 AM to 3:30 PM

Registration Hours

Sunday
Exhibitors –
8:00 AM to 5:00 PM
All Others –
3:00 PM to 5:00 PM

Note: Special Registration Desk for Sunday Short Courses – Please report directly to EAS Short Course Office at the Holiday Inn

Monday & Tuesday
7:30 AM to 5:00 PM
Wednesday
7:30 AM to 4:00 PM
Thursday
8:00 AM to 2:00 PM

Photography and Cell Phone Use
The use of cameras and cell phones is not permitted during program sessions. Cameras are permitted on the exhibit floor; however, permission from the exhibitors involved must be obtained before photographs of booths or their contents may be taken.

Badges
Your badge is your admission to many of the activities at the 2010 EAS. Please make sure that you remember to bring it with you when you come to the meeting. There is a $25 fee for the processing of lost or misplaced badges.

EAS Shuttle Service
EAS Shuttle Buses will run between the Garden State Exhibit Center and the Holiday Inn Monday-Thursday. For schedules and information, please check at the EAS Information Center in the Exhibit Center.

More Information
To obtain answers to EAS-related questions before and after the meeting:
EAS Hotline: 732-449-2280
EAS Fax line: 732-612-1123
EAS e-mail: askEAS@EAS.org

Eastern Analytical Symposium & Exposition, Inc.
P.O. Box 185
Spring Lake, NJ, 07762, USA
Welcome to EAS 2010! Another exciting and diverse program has been assembled for this 49th meeting. Several new sessions are being introduced in addition to providing updates and ongoing developments in traditional areas. From Art Conservation to Counterfeit Detection to Green Chemistry to Quality-by-Design, from Pharmaceuticals to Polymers, from Benchtop to Hand-held, from Innovations in Teaching to Managing Outsourcing, from Automation to Data Analysis, from Sample Preparation to Safety and Compliance, the applications and topics are varied and numerous, designed to expand your capabilities, your networks, and “Expand your Analytical Horizons;” our theme for this year.

Highlights of this year’s program include a special session dedicated to the memory of Connie Paralusz, a former president of EAS. A wide array of sessions pertinent to pharmaceuticals are presented ranging from dried blood spot analysis to working with complex formulations and increasing throughput. A multitude of separations topics are presented encompassing microfluidics, two-dimensional GC, HPLC, UPLC, HILIC, CE and CEC. This year, for the first time, we are offering several sessions on Green Chemistry. Synchrotron radiation, media preservation, and polymer deterioration are focal points of the cultural heritage sessions offered in conjunction with the New York Conservation Foundation. Surface science characterization of nanoparticles, as well as, imaging and interfacial analysis are presented. Microscopy, both forensic and industrial, is also offered. Forensics is a hot topic with information about trace analyses and a new session from the Vidocq Society highlighting their experiences in solving cold cases. A broad spectrum of spectroscopy, including IR, Raman, and UV/Vis fill out the program. Magnetic resonance sessions, some with a spin on biological systems, are presented. Additionally, mass spectrometry with developments in the tandem arena, and applications to a variety of arenas using multiple configurations are offered.

In addition, there are six EAS award sessions honoring exemplary work in a number of areas. These include the prestigious Fields Award, covering multidisciplinary areas of analytical chemistry; as well as, awards representing chemometrics, magnetic resonance, mass spectrometry, near-infrared spectroscopy, and separation science. Also, the NYSAS Gold Medal, AMS Benedetti-Pichler, and NYMS Ernst Abbe award sessions are presented.

To complement the program, opportunities to advance skills via another venue exist through the substantive short course offerings that have been assembled. A comprehensive selection is available. From just the sampling of topics listed here, the navigation of these many options is made easier through the conferences-in-miniature, which is provided in this Program for your convenience.

As you can see, there is a lot going on at EAS2010. Opportunities to learn and network abound. I look forward to your attendance and participation at EAS 2010 and another successful conference focused on “Expanding your Analytical Horizons”.

Dr. Shirley Fischer-Drowos
2010 Program Chair
2010 EAS Conferences-in-Miniature

**ART CONSERVATION**

**Technical Sessions**
- Synchrotron Radiation for Cultural Heritage (11/15, AM, PM)
- Digital Media in Cultural Heritage: New Preservation Technologies (11/16, AM)
- Plastics and Synthetic Polymers in Cultural Heritage: Recent Advances in Identifying and Monitoring Deterioration (11/16, PM)
- Plastics, Acid Vapor: Historic and Contemporary Optical Media (11/17, PM)
- Applications of Hand-Held Spectrometers (11/18, AM)

**Short Course**
- Plastics-State of the Art Techniques Important in Cleaning their Surfaces (11/17 and 11/18)

**AUTOMATION/DATA ANALYSIS**

**Technical Sessions**
- New Developments of Automation within the Analytical Laboratory (11/15, AM)
- Poster Session: Laboratory Data Analysis Using Excel (11/17)

**Short Courses**
- Advanced Excel®: Write Your Own Functions and Macros (11/14)
- Chemometrics without Equations (11/14)
- Enhanced Productivity by Design in the Analytical Laboratory: Design of Experiments for Analytical Chemists (11/14)
- Laboratory Data Analysis Using Excel®: New Uses for a Familiar Tool (11/15)
- Data Analysis for Improved Productivity in the Analytical Laboratory (11/16)

**BIOANALYSIS**

**Technical Sessions**
- EAS Award for Outstanding Achievements in Magnetic Resonance, Honoring Cecil Dybowski (11/15, AM)
- Tandem Mass Spectrometry (11/15, AM)
- UHPLC and Alternatives: Continued Developments (11/15, AM)
- Poster Session: Bioanalytical Method Development (11/15)
- EAS Award for Outstanding Achievements in Mass Spectrometry, Honoring Richard M. Caprioli (11/15, AM)
- Magnetic Resonance of Biological Systems (11/15, PM)
- Mass Spectrometry: A Tool for Analysis of Biologics, Pharmaceutical, and Environmental Samples (11/16, PM)
- Chromatographic Method Development: Motion, Speed and Velocity (11/17, PM)
- Bioanalytical Tools and Sample Preparation Methodologies (11/18, AM)
- Vibrational Spectroscopy in the Biomedical Field (11/18, PM)

**Short Courses**
- The Role of Chromatography in the Analysis and Characterization of Protein Therapeutic Drugs (11/16)
- The Analysis and Characterization of Protein Therapeutic Drugs (11/16 and 11/17)

**CHEMOMETRICS**

**Technical Sessions**
- Chemometrics for Chemical Sensing (11/17, AM)
- EAS Award for Outstanding Achievements in Chemometrics, Honoring Johan A. Westerhuis (11/17, PM)
- Chemometrics - Methods, Calibration Transfer and Applications (11/18, AM)

**Short Course**
- Chemometrics without Equations (11/14)

**CHROMATOGRAPHY**

- See Separation Sciences

**EDUCATION**

**Technical Sessions**
- Poster Session: Science Education: Investing in the Future (11/16)
- Innovations in Teaching Analytical Chemistry (11/17, PM)

**Short Courses**
- Advanced Excel®: Write Your Own Functions and Macros (11/14)
- Laboratory Data Analysis Using Excel®: New Uses for a Familiar Tool (11/15)
- How to Create a More Effective Lab Safety Program (11/16)
- Authoring High Quality Technical Reports (11/18)

**SEMINARS**
- Teaching Green Chemistry in High School (11/14, PM)
- What Does an Analytical Chemist Do in Industry (11/15)
- Analytical Chemistry and Forensic Science (11/16)
- Evolution of Industrial Careers for Chemists: Diversity, Technology
- Advancements and Job Security (11/17)

**ENVIRONMENTAL**

**Technical Sessions**
- Poster Session: Environmental Analysis: Clean it Up; Green it Up: Multiple Approaches to Environmental Analysis of Materials (11/15)
- Food Analysis (11/16, AM)
- Mass Spectrometry: A Tool for Analysis of Biologics, Pharmaceutical, and Environmental Samples (11/16, PM)
- Poster Session: Diverse Solutions to Solve Analysis Problems (11/17)
- New Horizons in In-Situ Remote Sensing (11/17, AM)

**Short Course**
- Sample Preparation: The Chemistry Behind the Techniques (11/16)

**Seminar**
- Teaching Green Chemistry in High School (11/14, PM)

**FORENSIC ANALYSIS**

**Technical Sessions**
- Solving Cold Cases: Experiences from The Vidocq Society (11/16, AM)
- Trace Analysis in Forensic Chemistry (11/16, PM)
- A “Trip” Through the Forensic Realm (11/17, AM)
- Forensic Microscopy IV “What is it? Who does it?” (11/17, PM)

**Seminar**
- Analytical Chemistry and Forensic Science (11/16)

**GAS CHROMATOGRAPHY**

**Technical Sessions**
- Toward Comprehensive Two-Dimensional Gas Chromatography Separations (11/15, PM)
- Gas Chromatography: An Old Friend with New Tricks (11/16, AM)
- Poster Session: Problem Solving Through Better Chromatography (11/16)

**Short Course**
- Practical Gas Chromatography: Packed and Capillary Columns (11/14 and 11/15)

**INFRARED SPECTROSCOPY**

**Technical Sessions**
- Good Vibrations: Finding Out what is in Material with IR and Raman Spectroscopy (11/15, AM)
INFRARED SPECTROSCOPY (continued)

- New Advances in Instrumentation and Pharmaceutical Analysis (11/16, AM)
- Counterfeit Pharmaceutical Detection Using Vibrational Spectroscopy (11/16, AM)
- EAS Award for Outstanding Achievements in NIR, Honoring James B. Reeves (11/17, AM)
- Quantitative Vibrational Analysis, Remembering Connie Paralusz (11/17, AM)
- Near-Infrared Spectroscopy (11/17, PM)
- Applications of Hand-Held Spectrometers (11/18, AM)
- Vibrational Spectroscopy in the Biomedical Field (11/18, PM)

LABORATORY MANAGEMENT

Technical Sessions

- What Does it Take to Run a Laboratory: Current Issues (11/16, PM)
- Managing Outsourcing (11/18, PM)

Short Courses

- Effective Laboratory Audits and Inspections (11/14)
- Analytical Laboratory Techniques for Pharmaceutical Chemists (11/15)
- How to Create a More Effective Lab Safety Program (11/16)
- Critical cGMP and ICH Guidelines for Analytical Laboratories (11/16)

LIQUID CHROMATOGRAPHY

Technical Sessions

- UHPLC and Alternatives: Continued Developments (11/15, AM)
- HPLC Retention Mechanism (11/16, AM)
- Poster Session: Problem Solving Through Better Chromatography (11/16)
- Poster Session: Analytical Problem Solving with HPLC Applications (11/16)
- Poster Session: HPLC: Columns for Specific HPLC Analysis (11/16)
- EAS Award for Outstanding Achievements in Separation Science, Honoring Brian A. Bidlingmeyer (11/16, PM)
- Innovations in Chromatographic Stationary Phases: Solid Core to Ion Exchange (11/17, AM)
- Fast HPLC Analysis (11/18, AM)

Short Courses

- Modern HPLC Method Development in Pharmaceutical Analysis (11/14)
- LC/MS: Theory, Instruments, and Applications (11/14 and 11/15)
- How to Develop Validated HPLC Methods: Rational Design with Practical Statistics and Troubleshooting (11/17 and 11/18)
- Theory and Practice of Ultra High-Pressure Liquid Chromatography (UHPLC) (11/18)

MASS SPECTROMETRY

Technical Sessions

- Tandem Mass Spectrometry (11/15, AM)
- EAS Award for Outstanding Achievements in Mass Spectrometry, Honoring Richard M. Caprioli (11/15, PM)
- Poster Session: Challenges and Solutions using Mass Spectroscopy (11/15)
- EAS Award for Outstanding Achievements in the Fields of Analytical Chemistry, Honoring Richard D. Smith (11/16, AM)
- Mass Spectrometry: A Tool for Analysis of Biologics, Pharmaceutical, and Environmental Samples (11/16, PM)
- Vibration and Spins: Spectroscopic Analysis of Materials (11/16, PM)

Short Courses

- LC/MS: Theory, Instruments, and Applications (11/14 and 11/15)
- Interpretation of Mass Spectra with Pracitical Solutions to Problems (11/16)

MASS SPECTROMETRY (continued)

- Impurities and Degradants Identification: Strategies for Structure Elucidation via Chromatography, MS and NMR (11/17)

MICROSCOPY

Technical Sessions

- Forensic Microscopy IV “What is it? Who does it?” (11/17, PM)
- Industrial Microscopy (11/18, AM)
- New York Microscopical Society Ernst Abbe Award, Honoring Dale Newbury (11/18, PM)

NMR SPECTROSCOPY

Technical Sessions

- EAS Award for Outstanding Achievements in Magnetic Resonance, Honoring Cecil Dybowski (11/15, AM)
- Magnetic Resonance of Biological Systems (11/15, PM)
- Vibration and Spins: Spectroscopic Analysis of Materials (11/17, AM)
- New York Section of the Society for Applied Spectroscopy Gold Medal Award, Honoring Cecil Dybowski (11/17, PM)

Short Course

- Impurity and Degradant Identification: Strategies for Structure Elucidation via Chromatography, MS and NMR (11/17)

PHARMACEUTICAL ANALYSIS

Technical Sessions

- Dried Blood Spot Analysis in Pharmaceutical Discovery and Development (11/15, AM)
- Good Vibrations: Finding Out What is in Material with IR and Raman Spectroscopy (11/15, AM)
- Poster Session: Challenges and Solutions using Mass Spectroscopy (11/15)
- Increasing Throughput in Ligand Binding Assays used to Enable Therapeutic Programs (11/15, PM)
- PAT Concepts and Applications for Pharmaceutical Products (11/15, PM)
- New Advances in Instrumentation and Pharmaceutical Analysis (11/16, AM)
- Counterfeit Pharmaceutical Detection using Vibrational Spectroscopy (11/16, AM)
- Mass Spectrometry: A Tool for Analysis of Biologics, Pharmaceutical, and Environmental Samples (11/16, PM)
- Quality-by-Design Approach to Analytical Development (11/16, PM)
- Poster Session: New Advances in Pharmaceutical Analysis (11/17)
- Electrochemistry in Drug Development, Design, and Testing (11/17, PM)
- Near-Infrared Spectroscopy (11/17, PM)
- Analytical Challenges in Pharmaceutical Analysis - Working with Products with Complex Formulations (11/18, AM)
- Dissolution Applications in Pharmaceutical Development (11/18, PM)
- Improving Pharmaceutical Properties, Formulations and Support (11/18, PM)
- Managing Outsourcing (11/18, PM)

Short Courses

- (Please also see MS and LC listings for additional courses)
- Physical Characterization and Analytical Test of Pharmaceutical Solids (11/14)
- The Chemistry of Drug Degradation (11/15)
- Drug Development Process for Chemists (11/16)
- The Role of Chromatography in the Analysis and Characterization of Protein Therapeutic Drugs (11/16)
- The Analysis and Characterization of Protein Therapeutic Drugs (11/16 and 11/17)
- Leachables and Extractables in Pharmaceutical Development (11/17)
- Impurity and Degradant Identification: Strategies for Structure Elucidation via Chromatography, MS and NMR (11/17)
### PHARMACEUTICAL ANALYSIS (continued)
- Dissolution: A Rational Approach to Developing and Validating Methods for a Variety of Purposes (11/18)

### POLYMERS/PLASTICS
#### Technical Sessions
- Advanced Polymer Characterization Techniques (11/15, PM)
- Plastics and Synthetic Polymers in Cultural Heritage: Recent Advances in Identifying and Monitoring Deterioration (11/16, PM)
- Quantitative Vibrational Analysis, Remembering Connie Paralusz (11/17, AM)
- Plastics, Acid Vapor: Historic and Contemporary Optical Media (11/17, PM)

#### Short Course
- Practical Introduction to Raman Spectroscopy (11/18)

### RAMAN SPECTROSCOPY
#### Technical Sessions
- Good Vibrations: Finding Out What is in Material with IR and Raman Spectroscopy (11/15, AM)
- Raman Spectroscopy: From the Laboratory to the Process Line (11/16, PM)
- Counterfeit Pharmaceutical Detection Using Vibrational Spectroscopy (11/16, AM)
- Quantitative Vibrational Analysis, Remembering Connie Paralusz (11/17, AM)
- Applications of Hand-Held Spectrometers (11/18, AM)

#### Short Course
- Practical Introduction to Raman Spectroscopy (11/18)

### SAFETY AND COMPLIANCE
#### Short Course
- How to Create a More Effective Lab Safety Program (11/16)

### SAMPLE PREPARATION
#### Technical Sessions
- Poster Session: Environmental Analysis: Clean it Up, Green it Up: Multiple Approaches to Environmental Analysis of Materials (11/15)
- Poster Session: Sample Preparation Techniques: Get it Right Before You Get it Wrong (11/17)
- A Variety of Sample Preparation in Today’s Laboratory (11/18, AM)
- Bioanalytical Tools and Sample Preparation Methodology (11/18, AM)

#### Short Course
- Sample Preparation: The Chemistry Behind the Techniques (11/16)

### SEPARATION SCIENCES
#### Technical Sessions
- Microfluids: Current State, Applications and Future Directions (11/15, AM)
- UHPLC and Alternatives: Continued Developments (11/15, AM)
- High Performance Chromatography Specialties: HILIC, CE, CEC (11/15, PM)
- Toward Comprehensive Two-Dimensional Gas Chromatography Separations (11/15, PM)
- HPLC Retention Mechanism (11/16, AM)
- Gas Chromatography: An Old Friend with New Tricks (11/16, AM)
- Poster Session: Problem Solving Through Better Chromatography (11/16)
- Poster Session: Analytical Problem Solving with HPLC Applications (11/16)
- Poster Session: HPLC: Columns for Specific HPLC Analysis (11/16)
- EAS Award for Outstanding Achievements in Separation Science, Honoring Brian A. Bidlingmeyer (11/16, PM)
- Innovations in Chromatographic Stationary Phases: Solid Core to Ion Exchange (11/17, AM)
- Poster Session: Diverse Solutions to Solve Analysis Problems (11/17)
- Chromatographic Method Development: Motion, Speed and Velocity (11/17, PM)
- Fast HPLC Analysis (11/18, AM)
- Supercritical Fluid Chromatography: Current Progress (11/18, PM)

### SEPARATION SCIENCES (continued)
#### Short Courses
- Modern HPLC Method Development in Pharmaceutical Analysis (11/14)
- LC/MS: Theory, Instruments, and Applications (11/14 and 11/15)
- Practical Gas Chromatography: Packed and Capillary Columns (11/14 and 11/15)
- The Role of Chromatography in the Analysis and Characterization of Protein Therapeutic Drugs (11/16)
- The Analysis and Characterization of Protein Therapeutic Drugs (11/16 and 11/17)
- Practical Headspace Gas Chromatography (11/17)
- How to Develop Validated HPLC Methods: Rational Design with Practical Statistics and Troubleshooting (11/17 and 11/18)
- Quantitative Analysis for Chromatographers (11/17 and 11/18)
- Troubleshooting Chromatographic Systems (11/17 and 11/18)
- Theory and Practice of Ultra High-Pressure Liquid Chromatography (UHPLC) (11/18)

### SPECTROSCOPY
#### Technical Sessions
- Good Vibrations: Finding Out What is in Material with IR and Raman Spectroscopy (11/15, AM)
- New Advances in Instrumentation and Pharmaceutical Analysis (11/16, AM)
- Counterfeit Pharmaceutical Detection Using Vibrational Spectroscopy (11/16, AM)
- Raman Spectroscopy: From the Laboratory to the Process Line (11/16, PM)
- Poster Session: Diverse Solutions to Solve Analysis Problems (11/17)
- EAS Award for Outstanding Achievements in NIR, Honoring James B. Reeves (11/17, AM)
- Quantitative Vibrational Analysis, Remembering Connie Paralusz (11/17, AM)
- Vibration and Spins: Spectroscopic Analysis of Materials (11/17, AM)
- New York Section of the Society for Applied Spectroscopy Gold Medal Award, Honoring Cecil Dybowski (11/17, PM)
- Near-Infrared Spectroscopy (11/17, PM)
- American Microchemical Society Benedetti-Pichler Award, Honoring Joel M. Harris (11/18 AM)
- Applications of Hand-Held Spectrometers (11/18, AM)
- Vibrational Spectroscopy in the Biomedical Field (11/18, PM)

#### Short Courses
- Infrared Spectral (IR) Interpretation I (11/15)
- Infrared Spectral (IR) Interpretation II (11/16)
- Infrared Spectral (IR) Interpretation I and II (11/15 and 11/16)
- Introduction to Near-Infrared Spectroscopy: Applications in the Pharmaceutical Industry (11/16)
- Practical Introduction to Raman Spectroscopy (11/18)

### SURFACE ANALYSIS
#### Technical Sessions
- Imaging Techniques in Surface and Interface Analysis (11/16, AM)
- Advanced Materials and Nanoparticles Characterization (11/17, AM)
- Chemical Reactions at Surfaces (11/16, PM)
### Technical Program
#### 2010 Eastern Analytical Symposium & Exposition

**Monday Morning, November 15, 2010**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td><strong>Ballroom East</strong></td>
</tr>
<tr>
<td></td>
<td>EAS Award for Outstanding Achievements in Magnetic Resonance</td>
</tr>
<tr>
<td></td>
<td>Honoring Cecil Dybowski, University of Delaware</td>
</tr>
<tr>
<td></td>
<td>Sponsored by Bruker BioSpin and New Era Enterprises</td>
</tr>
<tr>
<td></td>
<td>Chair: Anita Brandolini, Ramapo College of New Jersey</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>9:00</td>
<td>Five Decades of Dipolar Couplings in Soft Matter, Edward T. Samulski</td>
</tr>
<tr>
<td></td>
<td>(University of North Carolina-Chapel Hill)</td>
</tr>
<tr>
<td>9:25</td>
<td>Prospects for Greatly Enhancing NMR Sensitivity, Jeffrey A. Reimer</td>
</tr>
<tr>
<td></td>
<td>(University of California-Berkeley)</td>
</tr>
<tr>
<td>9:50</td>
<td>NMR Studies of Enhanced Nuclear Polarization in InP, Joel B. Miller,</td>
</tr>
<tr>
<td></td>
<td>Christopher A. Klug, Karen L. Sauer, James P. Yesinowski, Naval</td>
</tr>
<tr>
<td></td>
<td>Research Laboratory</td>
</tr>
<tr>
<td>10:15</td>
<td>Break</td>
</tr>
<tr>
<td>10:35</td>
<td>Sodium-23 MR Techniques: Biomedical Applications, Navin Bansal</td>
</tr>
<tr>
<td></td>
<td>(University of Indiana)</td>
</tr>
<tr>
<td>11:00</td>
<td>Solid-State NMR Studies of Protein Assemblies, Tatyana Polenova,</td>
</tr>
<tr>
<td></td>
<td>University of Delaware</td>
</tr>
<tr>
<td>11:25</td>
<td>Presentation of the EAS Award for Outstanding Achievements in Magnetic</td>
</tr>
<tr>
<td></td>
<td>Resonance</td>
</tr>
<tr>
<td>11:30</td>
<td>Solving Problems with Magnetic Resonance: Applications and Fundamental</td>
</tr>
<tr>
<td></td>
<td>Developments, Cecil Dybowski, University of Delaware</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>9:00</td>
<td><strong>Synchrotron Radiation for Cultural Heritage I</strong></td>
</tr>
<tr>
<td></td>
<td>Organized in cooperation with New York Conservation Foundation</td>
</tr>
<tr>
<td></td>
<td>Chair: Hannelore Roemich, NYU Institute of Fine Arts Conservation Center</td>
</tr>
<tr>
<td>9:00</td>
<td>Beyond the Surface: Analysis of Cracked Archaeological Glass, Hannelore</td>
</tr>
<tr>
<td></td>
<td>Roemich, NYU Institute of Fine Arts Conservation Center, Franco</td>
</tr>
<tr>
<td></td>
<td>Zanini, Sincrotrone Trieste, Katrin Wittstadt, Fraunhofer ISC, Carola</td>
</tr>
<tr>
<td></td>
<td>Mueller-Weinitschke, Dombauverwaltung</td>
</tr>
<tr>
<td>9:30</td>
<td>Rust, Nails, Armor and X-Rays: Examples of Studies about Corrosion and</td>
</tr>
<tr>
<td></td>
<td>Provenance of Archaeological Iron Objects, Philippe Dillmann, CNRS</td>
</tr>
<tr>
<td>10:00</td>
<td>Alteration of Glass, Inks and Pigments Studied by Means of Synchrotron</td>
</tr>
<tr>
<td></td>
<td>Radiation Based Methods, Koen Janssens, Geert Van Der Snickt, Letizia</td>
</tr>
<tr>
<td></td>
<td>Monico, Matthias Alfeld, Simone Cagno, Gert Nuyts, University of</td>
</tr>
<tr>
<td></td>
<td>Antwerp, Joris Dik, Peter Reishig, Delft University of Technology,</td>
</tr>
<tr>
<td></td>
<td>Lucas Helfen, European Sincrotrone Radiation Facility</td>
</tr>
<tr>
<td>10:30</td>
<td>Break</td>
</tr>
<tr>
<td>10:50</td>
<td>Sound at the Speed of Light: Non-Destructive Structural Analysis of</td>
</tr>
<tr>
<td></td>
<td>Historical Musical Instruments with Sincrotrone Radiation, Franco</td>
</tr>
<tr>
<td></td>
<td>Zanini, Sincrotrone Trieste, Diego Dreossi, Nicola Codini, Emanuele</td>
</tr>
<tr>
<td></td>
<td>Marconi, Culturali e Paesaggistici della Lombardia</td>
</tr>
<tr>
<td>11:20</td>
<td>Recent Results and Perspectives for Synchrotron-Based Research on</td>
</tr>
<tr>
<td></td>
<td>Archaeological and Historical Materials, Development of the IPANEMA</td>
</tr>
<tr>
<td></td>
<td>Research Platform at SOLEIL, Loic Bertrand, Marie-Angelique Languille,</td>
</tr>
<tr>
<td></td>
<td>Serge Cohen, Laurianne Robinet, IPANEMA</td>
</tr>
<tr>
<td>9:00</td>
<td><strong>Tandem Mass Spectrometry</strong></td>
</tr>
<tr>
<td></td>
<td>Chair: Barbara S. Larsen, DuPont</td>
</tr>
<tr>
<td>9:00</td>
<td>MALDI TOF/TOF Mass Spectrometry for Rapid Structural Analysis of</td>
</tr>
<tr>
<td></td>
<td>Biomolecules, Plamen A Demirev, Johns Hopkins University</td>
</tr>
<tr>
<td>9:30</td>
<td>Total Solvent-Free Analysis, Charge Remote Fragmentation, and Structures</td>
</tr>
<tr>
<td></td>
<td>of Highly Charged Laserspray Ions using IMS/MS/MS, Sarah Trimpin,</td>
</tr>
<tr>
<td></td>
<td>Wayne State University</td>
</tr>
<tr>
<td>10:00</td>
<td>Development of a LC/MS/MS Method for Determining VX Concentration from</td>
</tr>
<tr>
<td></td>
<td>DAAMS Air Sampling Tubes, Ronald A. Evans, Wendy L. Smith, US Army</td>
</tr>
<tr>
<td></td>
<td>ECBS</td>
</tr>
<tr>
<td>10:30</td>
<td>Break</td>
</tr>
<tr>
<td>11:20</td>
<td>Application of LTQ/Orbitrap MS to Small Molecule Structure Elucidation,</td>
</tr>
<tr>
<td></td>
<td>Bogdan Szostek, DuPont</td>
</tr>
<tr>
<td></td>
<td>GC/Q/TOF: Tandem MS for Target, Non-Target and Unknown Compounds, Terry</td>
</tr>
<tr>
<td></td>
<td>Sheehan, Agilent Technologies</td>
</tr>
<tr>
<td>9:00</td>
<td><strong>Green Science: How Analytical Chemists Do It, Session I</strong></td>
</tr>
<tr>
<td></td>
<td>Chairs: Douglas Raynie, South Dakota State University and Alvin Bober</td>
</tr>
<tr>
<td>9:00</td>
<td>Green Analytical Chemistry, Jennifer L. Young, ACS Green Chemistry</td>
</tr>
<tr>
<td></td>
<td>Institute</td>
</tr>
<tr>
<td>9:30</td>
<td>Microflow UHPLC: Sensitivity and Performance with a Fraction of the</td>
</tr>
<tr>
<td></td>
<td>Solvent, David W. Neyer, Steve Hobbs, Phillip H. Paul, Don W. Arnold,</td>
</tr>
<tr>
<td></td>
<td>Eksigent Technologies</td>
</tr>
<tr>
<td>10:00</td>
<td>Greener Chelating Agents for Analytical Titrations, Douglas Raynie,</td>
</tr>
<tr>
<td></td>
<td>Ganesh Degam, Brad Anderson, Kalli J. Odegaard, South Dakota State</td>
</tr>
<tr>
<td></td>
<td>University</td>
</tr>
<tr>
<td>10:30</td>
<td>Break</td>
</tr>
<tr>
<td>10:50</td>
<td>The Green Solvent - Supercritical Carbon Dioxide - Not Just for</td>
</tr>
<tr>
<td></td>
<td>Extractions Anymore, Rolf Schiak, Applied Separations</td>
</tr>
<tr>
<td>11:20</td>
<td>Alternative Recycling of Post-Consumer PLA Waste at a Molecular Level,</td>
</tr>
<tr>
<td></td>
<td>Richard Gumney, Jennifer Boice, Jessica Haffner, Cassandra Cacaq, Amanda</td>
</tr>
<tr>
<td></td>
<td>Taylor, Nancy Lee, Simmons College</td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
</tr>
<tr>
<td>-------</td>
<td>----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>9:00</td>
<td><strong>Increasing Throughput in Ligand Binding Assays used to Enable Therapeutic Programs</strong></td>
</tr>
<tr>
<td></td>
<td>Chair: Johanna R. Mora, Bristol-Myers Squibb</td>
</tr>
<tr>
<td>9:00</td>
<td>22 Bead Array-Based Detection - Theory and Experiment, Jason A. Thompson, Haim H. Bau, University of Pennsylvania</td>
</tr>
<tr>
<td>9:30</td>
<td>23 The Validation of a Method for the Analysis of Melphalan using the Gyros Platform, Lee Abberley, Matthew Szapacs, Charles S. Hottenstein, David Citerone, GlaxoSmithKline</td>
</tr>
<tr>
<td>10:00</td>
<td>24 Multiplexed Antibody Isotyping Assays to Characterize the Immune Response to Vaccines, Mark T. Esser, Katie Matys, Greg Kulis, Paul Liberator, PPD Vaccines and Biologics Center of Excellence</td>
</tr>
<tr>
<td>10:30</td>
<td>Break</td>
</tr>
<tr>
<td>10:50</td>
<td>25 Automation of Biomarker Immunoassays, Allen (Oi) Wong, Yan J Zhang, Paul Rhyne, Bristol-Myers Squibb</td>
</tr>
<tr>
<td>11:20</td>
<td>Round Table Discussion, Johanna R. Mora, Bristol-Myers Squibb</td>
</tr>
<tr>
<td>10:40</td>
<td>33 Automated Forced Degradation in the ARD Laboratory: Current uses and Future Direction, Adriene Malsbury, Anthony Alexander, Thomas F. Hooker, Scott Jennings, Bristol-Myers Squibb</td>
</tr>
<tr>
<td>11:20</td>
<td>34 Automating the Dissolution Laboratory: A Case Study, Anthony J. Iarriccio, Novartis</td>
</tr>
<tr>
<td>10:00</td>
<td><strong>Dried Blood Spot Analysis in Pharmaceutical Discovery and Development</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Sponsored by Covance and GE HealthCare</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Chair: Qin Ji, Bristol-Myers Squibb</strong></td>
</tr>
<tr>
<td>9:00</td>
<td>26 Advances in Direct Analysis Techniques for Dried Blood Spots, Jonathan Kehler, GlaxoSmithKline</td>
</tr>
<tr>
<td>9:30</td>
<td>27 Exploring the Feasibility of Applying Dried Blood Spots (DBS) as an Alternative Matrix to Support Drug Metabolism Studies in Drug Development, Lijuan Wang, Zhaopie Zeng, Sanofi-Aventis</td>
</tr>
<tr>
<td>10:00</td>
<td>28 Practical Aspects of Dried Blood Spots (DBS) Bioanalysis: Importance of Assay Sensitivity, Fumin Li, Covance</td>
</tr>
<tr>
<td>10:30</td>
<td>Break</td>
</tr>
<tr>
<td>10:50</td>
<td>29 Bioanalytical Strategies Utilizing Dried Blood Spot Sampling and LC/MS/MS in Drug Discovery, Celia J. Darienzo, Bristol-Myers Squibb</td>
</tr>
<tr>
<td>11:20</td>
<td>30 A Sample Dilution Strategy for DBS LC/MS/MS Assays, Guowen Liu, Bristol-Myers Squibb</td>
</tr>
<tr>
<td>10:40</td>
<td>35 Dynamic Infra-Red Spectroscopy of Electrically Conductive Polymers, Frank S. Weston, Varian, Georgia A. Arbuckle-Keil, Rutgers University, Isao Noda, Procter &amp; Gamble</td>
</tr>
<tr>
<td>11:20</td>
<td>36 LC/IR Analysis to Characterize Polymeric Excipients for Lot-to-Lot Variations, Degradation and Stability in Pharmaceutical Formulation, Ming Zhou, Bill Carson, Sidney Bourne, David Dunn, Tom Kearney, Spectra Analysis Instruments</td>
</tr>
<tr>
<td>10:00</td>
<td>38 Portable PPM Level Biodiesel Detection, Dylan Wilks, Sandra Rintoul, Wilks Enterprise</td>
</tr>
<tr>
<td>10:20</td>
<td>Break</td>
</tr>
<tr>
<td>10:40</td>
<td>39 Pharmaceutical Analysis from Start to Finish by Raman Spectroscopy, Stuart Farquharson, Michael Donahue, Michael Patient, Wayne Smith, Carl Brouillette, Real-Time Analyzers</td>
</tr>
<tr>
<td>11:00</td>
<td>40 Routine Flexible Analysis using Raman Spectroscopy, Paulette Guillory-Gardner, Thermo Fisher Scientific</td>
</tr>
<tr>
<td>11:40</td>
<td>42 High-Throughput Trace Analysis using SERS-Active Microplates, Stuart Farquharson, Real-Time Analysts, David Drapcho, Digilab</td>
</tr>
<tr>
<td>10:00</td>
<td><strong>Microfluidics: Current State, Applications and Future Directions</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Sponsored by the Chromatography Forum of Delaware Valley</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Chair: Mary Ellen McNally, DuPont</strong></td>
</tr>
<tr>
<td>9:00</td>
<td>43 Comparison of the Dual-Opposite-Injection Separation Mode in Capillary and Microchip Electrophoresis, Joe P. Foley, Donna M. Blackney Beckett, Drexel University</td>
</tr>
<tr>
<td>9:40</td>
<td>44 Application of Microfabricated HPLC Technologies to Complex Sample Analysis, Don W. Arnold, Nicole Hebert, Bryce Young, Remco van Soest, David Neyer, Eksigent</td>
</tr>
<tr>
<td>10:20</td>
<td>Break</td>
</tr>
<tr>
<td>10:40</td>
<td>45 Microfluidics: Current State, Applications and Future Directions in Chemical Analysis, Gerald Rozing, Karsten K. Kraiczek, Fritz Bek, Kevin Killeen, Hong-feng Yin, Maggie Bynum, Reid Brennen, Tom van de Goor, Agilent Technologies</td>
</tr>
</tbody>
</table>
**Monday Poster Session: Bioanalytical Method Development**

*Poster Area in the Exhibit Hall*

12:00-2:00  
53 An LC/MS/MS Method for Quantitation of CEP-26401 in Human Urine, Yuexin Su, Elizabeth Aaron, Steve Gorman, Philmore Robertson, Cephalon

12:00-2:00  
54 Evaluation of the Dried Blood Spots Technique for the Determination of a Potent and Selective DGAT1 Inhibitor, Tapan K. Majumdar, Paradise Nouri, Shari Wu, Matthew Bryant, Novartis

12:00-2:00  
55 A Selective SPE/LC/MS/MS Assay for Simultaneous Quantitation of Multiple Amyloid Beta Peptides in Cerebrospinal Fluid, Erin E. Chambers, Diane M. Diehl, Waters, Mary E. Lame, Yanhua Zhang, Pfizer

12:00-2:00  
56 The Application of Electrochemistry to the Measurement of Polyphenols in Plants and Animals, Ian N. Acworth, Paul Gamache, Marc Plante, Bruce Bailey, Christopher Crafts, David Clark, ESA – A Dionex Company

12:00-2:00  
57 Superficially-Porous Fused-CoreTM Particles for the Rapid Separation of Polypeptides and Small Proteins, Stephanie A. Schuster, Brian M. Wagner, Barry E. Boyes, Joseph J. Kirkland, Advanced Materials Technology

12:00-2:00  
58 Withdrawn by the author.

12:00-2:00  
59 A Novel Sample Preparation Device for Improved Protein Precipitation in Discovery Bioanalytical Assays, Jessalynn P. Wheaton, Erin E. Chambers, Diane M. Diehl, Waters

12:00-2:00  
60 Leveraging E-WorkBook to Streamline Operational, Quality Assurance and Reporting Processes in the Bioanalysis Laboratory, Scott Weiss, IDBS

12:00-2:00  
61 Withdrawn by the author.

12:00-2:00  
62 Antimicrobial Activity of Crude Extracts of Cissus Vitiginea Linn, Kalaiselvi Balasubramanian, Cis Pharma, Umasankar Ramasamy, Novel Laboratories, Suseela Mahadevan, Madras Medical College

**Monday Poster Session: Environmental Analysis: Clean it Up; Green it Up: Multiple Approaches to Environmental Analysis of Materials**

*Poster Area in the Exhibit Hall*

12:00-2:00  
63 Micro Solid-Phase Extraction using Carbon Nanotubes as Sorbents for Monitoring Pharmaceutical Residues in Water, Madhuleena Bhadra, Ortlnida Sae Khow, Somenath Mitra, New Jersey Institute of Technology

12:00-2:00  
64 EPA Method 3546: Microwave Accelerated Extraction as a “Green” Approach to Environmental Sampling, David Gunn, Milestone

12:00-2:00  
65 Automated Extraction and Dynamic Clean-Up of Environmental Samples, David E. Knowles, Richard E. Carlson, Brian C. Dorich, Brett J. Murphy, Bruce E. Richter, Eric S. Francis, Dionex

12:00-2:00  
66 Simultaneous Determination of Airborne Ozone and Carbonyls using a Two-Bed Sampling Cartridge Containing Trans-1,2-Bis(2-pyridyl)ethylene and 2,4-Dinitrophenylhydrazone, Leonard Sidisky, James L. Desorce, Supelco/Sigma-Aldrich, Shigehisa Uchiyama, National Institute of Public Health

12:00-2:00  
67 Compendium Method TO-17 for Analysis of Volatile Organic Compounds (VOCs) in Air: Optimized Instrument Parameters and Method Validation, Laura Chambers, Trent Sprengle, Gary Engelhart, OI Analytical

12:00-2:00  
68 Substantially Improved Yield During Safe Sample Concentration Prior to Analysis, Rob H. D. Darrington, Ian N. Whitehall, Genevac, Glenn T. Pickett, Aardvark Action Marketing

12:00-2:00  
69 Analysis of Biodiesel and Its Blends with Petroleum Diesel as an Alternative “Green” Fuel According to ASTM Methods, James D. Stuart, Christopher R. Perkins, Richard S. Parnas, Anthony A. Provatas, University of Connecticut

12:00-2:00  
70 Quality Control of Biodiesel Fuel Utilizing Inductively Coupled Plasma Optical Emission Spectrometry and Energy Dispersive X-Ray Fluorescence Spectrometry, James D. Stuart, Christopher R. Perkins, Sniegoule Stapinski, Anthony A. Provatas, University of Connecticut

12:00-2:00  
71 Direct Mercury Analysis: A Fast, Effective, and Environmentally Safe Technique for Determination of Mercury in Soils, Sediments and Sludges, Johan Norfl, Milestone
12:00-2:00  72 Withdrawn by the author.
12:00-2:00  73 Determination of Hazardous Substances in Electrical and Electronic Equipment, Hari Subramaniam, Jay Gandhi, Anne Shearrow, Metrohm USA
12:00-2:00  74 Heavy Metals in New Jersey Sanitary Biosolids that are used as Fertilizer, Tsanangurayi Tongesayi, Patricia DaSilva, Katherine Dilger, Tristan Hollingsworth, Monmouth University
12:00-2:00  75 Total Organic Carbon Analysis of Solid Samples for Environmental and Quality Control Applications, Jeffrey R. Lane, Trent Sprenkle, Gary Engelhart, OI Analytical
12:00-2:00  76 A Microscopical Characterization of Fluorodeenitic Amphibole from Catania Region of Sicily, Louis Solebello, Craig Liska, International Asbestos Testing Laboratories, Gary Tomaino, Minerals Technologies
12:00-2:00  77 Investigation of Polarized Light Microscopy Differentiation of Erionite from Other Fibrous Zeolites, Louis Solebello, Craig Liska, International Asbestos Testing Laboratories, Gary Tomaino, Minerals Technologies

Monday Poster Session: New Trends in Hyphenated Spectroscopy

Poster Area in the Exhibit Hall

12:00-2:00  78 GPC/IR Analysis to Characterize Excipient Degradation and Lot-to-Lot Variations in Pharmaceutical Formulation, Ming Zhou, Bill Carson, Sidney Bourne, Spectra Analysis Instruments
12:00-2:00  79 GPC/IR Hyphenated Technique to Analyze Copolymer Compositions Across Molecular Weight Distributions, Ming Zhou, Bill Carson, Sidney Bourne, David Dunn, Spectra Analysis Instruments
12:00-2:00  80 Determination of Total Trans Fat: An Attenuated Total Reflection-Fourier Transform Infrared (ATR/FTIR) Spectroscopic International Collaborative Validation Study, Magdi M. Mossoba, US Food and Drug Administration
12:00-2:00  81 Enhanced Sensitivity of Trans Fat Determination by Infrared Spectroscopy, Magdi M. Mossoba, US Food and Drug Administration
12:00-2:00  82 Pyrolysis of New Jersey Pineland Leaf Litter Species, Jinnie Towey, Georgia A. Arbuckle-Keil, John Dighton, Rutgers University
12:00-2:00  83 Full Scan GPC/FTIR using the Infrared Fingerprint Region to Analyze Polyolefin Copolymers, Tom Kearney, Ming Zhou, Spectra Analysis Instruments
12:00-2:00  84 Fourier Transform Infrared (FTIR) Spectrophotometry as an Analytical Tool for Monitoring Organic Synthesis and Process Control, Peter P. Yeh, MacDermid
12:00-2:00  85 Vibrational Spectra of the Solid Phases 1,3-Difluorobenzene, Anthony G. Severdia, Delaware County Community College

12:00-2:00  86 Applications of Mixture Analysis to FTIR Spectra of Multi-Component Polymeric Systems, Dana Garcia, Arkema, Marie Scandone, Bio-Rad Laboratories
12:00-2:00  87 At-Line Moisture Determination of Powders and Tablets by Near-Infrared Spectroscopy and Microwave Resonance Sensors, Claudia Corredor, Dongsheng Bu, Douglas Both, Bristol-Myers Squibb
12:00-2:00  88 ClearView db Photometry Meets Sophistication, Greg Garbus, Susan J. Foulk, Terry R. Todd, Michael A. Broussard, Guided Wave
12:00-2:00  89 Withdrawn by the author.

Monday Poster Session: Challenges and Solutions using Mass Spectrometry

Poster Area in the Exhibit Hall

12:00-2:00  90 Use of GCxGC/TOF/MS in the Analysis of Petroleum Hydrocarbons: Advantages of Library-Searchable TOF Mass Spectra Combined with High Chromatographic Resolution, Kurt Thaxton, Lindsey Pyron, Nick Bukowski, EST Analytical
12:00-2:00  91 Evaluation of MS Scanning Speeds with UHPLC Peak Widths, William Hedgepeth, Masatoshi Takahashi, Shimadzu
12:00-2:00  92 A Strategy for the Evaluation of Mass Spectrometric Detectors for Gas Chromatography: Application to a Novel Time-of-Flight MS, Kurt Thaxton, Nick Bukowski, Markes International, Lindsey Pyron, EST Analytical
12:00-2:00  93 A New Syringe Needle Concentration System for the Analysis of Volatiles by HR GC/MS, Jeff Sheriff, Lindsey Pyron, Thierry Zesiger, EST Analytical
12:00-2:00  94 Withdrawn by the author.
12:00-2:00  95 Polymer Additives Screening using UHPLC/APPI/Q-TOF/MS and an Accurate Mass Database, Christie Bowden, Marina Despotopoulou, Arkema
12:00-2:00  96 HR LC/MS for Genotoxic Impurity Identification using Lewis Acid Complex Extraction, Keith B. McKellop, Scott Pennino, Boehringer Engelheim
12:00-2:00  97 On-Line Electrochemical/LC/MS Techniques for Profiling and Characterizing Metabolites and Reactive Species, Ian N. Acworth, Paul Gamache, Bruce Bailey, Christopher Crafts, Marc Plante, David Clark, ESA - A Dionex Company
12:00-2:00  98 Withdrawn by the author.
Monday Afternoon, November 15, 2010

**EAS Award for Outstanding Achievements in Mass Spectrometry**
Honoring Richard M. Caprioli, Vanderbilt University
*Sponsored by Thermo Fisher Scientific and Bruker Daltonics*
Chair: Kevin Schey, Vanderbilt University

*Ballroom West*

- 2:00 99 What Can Chemical Footprinting and Mass Spectrometry Teach Us about Proteins?, Michael Gross, Brian Gau, Hao Zhang, Jiawei Chen, Don Rempel, Washington University St. Louis
- 2:30 100 Tissue Imaging of Lipids by Mass Spectrometry, Robert C. Murphy, University of Colorado
- 3:00 101 High-Performance MALDI/TOF/TOF for Molecular Imaging, Marvin Vestal, Virgin Instruments
- 3:30 Break
- 4:20 Presentation of the EAS Award for Outstanding Achievements in Mass Spectrometry
- 4:25 103 Imaging Mass Spectrometry: New Views of Biology and Medicine, Richard M. Caprioli, Vanderbilt University

**Synchrotron Radiation for Cultural Heritage II**
*Organized in cooperation with New York Conservation Foundation*
Chair: Jennifer Mass, Winterthur Museum

*Tewksbury*

- 2:00 104 Hidden Images, Buried Interfaces, Vanishing Masterpieces: Recent Confocal X-Ray Fluorescence and XANES Experiments on Paintings at CHESS, Jennifer L. Mass, Winterthur Museum, Barbara Buckley, Margaret Little, Barnes Foundation, Conan Weiland, Fang Fang, University of Delaware, Kenneth Finkelstein, Cornell University
- 3:00 106 An Approach to Modern Materials using Archaeomimetic Analogues: The Case of Maya Blue, Eric Dooryhee, Brookhaven National Laboratory, Catherine Dejoie, Lawrence Berkeley National Laboratory, Pauline Martinetto, Pierre Strobel, Michel Anne, Institut Néel, Sylvie Blanc, Patrice Bordat, Ross Brown, Institut Pluridisciplinaire, Florence Porcher, Laboratoire Léon Brillouin, Manolo Sanchez del Rio, European Synchrotron Radiation Facility, Elsa van Elslande, Philippe Walter, Centre de Recherche et de Restauration des Musées de France
- 3:30 Break
- 3:50 107 Rapid-Scan X-Ray Fluorescence Imaging of Ancient Documents - The Archimedes Project and Beyond, Uwe Bergmann, Behnam Sadeghi, SLAC National Accelerator Laboratory
- 4:20 108 Fit for the Ring: SR-XRD, Phase Contrast Imaging and EXAFS Studies of Chinese Bronzes and Altered Pigments, Francesca Casadio, Suzanne Schnepf, Inge Fiedler, The Art Institute of Chicago, Marcus Young, Luciana Zanella, Jean-Francois Gaillard, Northwestern University, Jonathan Almer, Dean Haeffner, Argonne National Laboratory

**Magnetic Resonance of Biological Systems**
Chair: Tatyana Polenova, University of Delaware

*Ballroom East*

- 2:30 110 Conformational Dynamics of Lipid-Binding Modules in Protein Kinase C-Alpha, Tat'yana Igunumenova, Mikaela Stewart, Krystal Morales, Texas A&M University
- 3:00 111 Imaging Mesoscopic Nuclear Spin Noise with a Diamond Magnetometer, Carlos A. Meriles, Abdelghani Laraoui, City University of New York, Liang Jiang, Caltech, Jonathan S. Hodges, Columbia University, Paola Cappellaro, MIT, Mikhail Lukin, Garry Goldstein, Jeronimo Maze, Harvard University
- 3:30 Break
- 3:50 112 Selenium NMR Spectroscopy as a Versatile Probe of Selenoproteins, Sharon Rozovsky, Fei Li, University of Delaware
- 4:20 113 Imaging Domains in Biomembranes using PFG Diffusion Measurements in Lipid Bilayers Under Static and MAS Conditions, Megan Spence, University of Pittsburgh

**Green Science: How Analytical Chemist Do It, Session II**
Chairs: Douglas Raynie, South Dakota State University and Alvin Bober

*Westfield*

- 2:00 114 Improved, Green Protein Testing Accuracy at Food Production Facilities in Meat, Dairy and Other Foods, Michael Collins, Jr., Keller Barnhardt, Bill MacLuckie, CEM Corporation
- 2:30 115 Engaging Students and the Public in STEM (Science, Technology, Engineering, and Mathematics) Education in the Age of Electronics, Sandra K. K. Young, US Army Research Laboratory
- 3:00 116 Application of Capillary HPLC to the Analysis of In-Process Control and Cleaning Samples for the Pharmaceutical Industry, Xuejun Xu, Yun Ye, Bristol-Myers Squibb
- 3:30 Break

4:20  118  Greening Up Analytical Methodologies by Reducing Solvent Usage and Exposure, David E. Knowles, Bruce E. Richter, Dionex

**PAT Concept and Applications for Pharmaceutical Products**

**Chair: Oscar Liu, Merck**

**Ballroom Center**

2:00  119  Performance-Based Quality Specifications: The Relationship between Process Critical Control Parameters, Critical Quality Attributes, and Clinical Performance, Steven M. Short, James K. Drennen III, Strategic Process Control Technologies, Carl A. Anderson, Duquesne University

2:20  120  Application and Design of Experiment (DOE) Studies of Mixed-Mode Column in Pharmaceutical Analysis, Hui (Viviane) Zhao, Xin (Amy) Bu, Bristol-Myers Squibb

2:40  121  Diverse Efficiency of an AOTF/NIR Analyzer in a Pharmaceutical Plant, Angelina Hartini, Evan Ramer, Brimrose

3:00  122  Transfer Lab Content Uniformity Method to Automated On-Line System, Hui Li, Bruker Optics

3:20  Break

3:40  123  Development of a Universal At-Line Near-Infrared Spectroscopy (NIRS) Method to Determine Ribbon Density, Zhengi Shi, Carl A. Anderson, James Drennen, Duquesne University, Tim Stevens, Douglas Both, Bristol-Myers Squibb

4:00  124  The Development of an Automated On-Line Concentration/Reaction Monitoring Macro using Agilent 1100 HPLC, Jia Zang, Aaron J. Moment, Eric Sirota, David M. Tellers, Roy Helmy, Merck

4:20  125  Development of a Resin Screening Kit to Remove Electrophilic Potential Genotoxic Impurities from Pharmaceutical Compounds, Roy Helmy, Claire Lee, Mohammad Al-Sayah, Merck

4:40  126  Evaluation of Large Volume Injection for LCxGC Chiral and Agricalyl Analysis of Pharmaceutical Drugs, Atsu Apedo, Yingru Zhang, Michael B. Hicks, Douglas B. Moore, David Wang-Iverson, Adrienne Tymiak, Bristol-Myers Squibb, Nicholas H. Snow, Seton Hall University

**Advanced Polymer Characterization Techniques**

**Chair: Nancy Jestel, SABIC Innovative Plastics**

**Bedminster**

2:00  127  Extreme Field-of-View Low-Voltage Scanning Transmission Electron Microscopy (STEM) of Polymer and Biological Ultra-Thin Sections, John B. Yorston, Carl Zeiss SMT, Olivier Guise, SABIC-Innovative Plastics

2:30  128  Xtreme SEC: Pushing the Limits, Andre Striegel, Florida State University

3:00  129  Nanoscale IR Spectroscopy, Mechanical and Thermal Property Mapping with the Atomic Force Microscope, Craig Prater, Anasys Instruments

3:30  Break

3:50  130  New Developments in Field-Flow Fractionation of Polymers, S. Kim R, Ratanathanawongs Williams, J. Ray Runyon, Colorado School of Mines

4:20  131  Applications of DSC/NIR/Raman and Sorption Analysis/Raman to Polymers, Carlton G. Slough, Steven R. Aubuchon, TA Instruments, Maryann E. Cuellar, David J. Strachan, Kaiser Optical Systems

**Toward Comprehensive Two-Dimensional Gas Chromatography Separations**

**Sponsored by the Chromatography Forum of Delaware Valley**

**Chair: James Sullivan, Jindai Bio**

**Bridgewater**

2:00  132  Risk-Based Characterization and Assessment of Extractable Petroleum Hydrocarbon Contamination using Comprehensive Two-Dimensional Gas Chromatography with Dean’s-Switch Modulation, Robert G. Brown, Lancaster Laboratories, Stacy K. Seeley, Kettering University, John V. Seeley, Oakland University, James D. McCurry, Agilent Technologies

2:30  133  Normalization of GCxGC Retention Information Through the use of a Bi-Dimensional Retention Index System: Advances and Perspectives, John Dimandja, Spelman College

3:00  134  Application of Comprehensive Two-Dimensional Gas Chromatographic Separations to the Gulf of Mexico Oil Spill, Glenn S. Frysinger, Gregory J. Hall, US Coast Guard Academy

3:30  Break

3:50  135  Small Molecule Metabolite Identifications in Complex Biological Samples using Comprehensive Two-Dimensional Gas Chromatography Combined with Time-of-Flight Mass Spectrometry (GCxGC/TOFMS), Mark Libardoni, John Heim, LECO Corporation

4:20  136  Shifting the Paradigm in Thermal GCxGC Modulation, Tadeusz Gorecki, Ognjen Panic, Christopher McNeil, T. Nathan Oldridge, Ahmed Mostafa, University of Waterloo

**High Performance Chromatography Specialties:**

**HILIC, CE, CEC**

**Chair: Martha Hollomon, Widener University**

**Hillsborough**

2:00  137  Capillary Ion Chromatography - The Next Frontier, Arthur W. Fitchett, Michael G. Hvizd, Dionex

2:20  138  Assessment of a Modular, Multi-Task Device Connected to Capillary Electrophoresis for the Enrichment, Separation and Identification of Protein Biomarkers, Norberto Guzman, Princeton Biochemicals

2:40  139  Resolution Equation for Electrokinetic Chromatography Based on Retention Factors and Mobilities, Joe P. Foley, Drexel University
Tuesday Morning, November 16, 2010

EAS Award for Outstanding Achievements in the Fields of Analytical Chemistry
Honoring Richard D. Smith, Pacific Northwest National Laboratory
Sponsored by Bristol-Myers Squibb
Chair: David Koppenaal, Pacific Northwest National Laboratory

Ballroom East

9:00 144 Problems and Opportunities for Mass Analysis of Complex Mixtures, Alan Marshall, Florida State University

9:25 145 Development of Novel Strategies for Proteomics and Glycomics Research, David Muddiman, North Carolina State University

9:50 146 The Integration of Separation Science with Mass Spectrometry for Protein Analysis, Barry L. Karger, Northeastern University

10:15 Break

10:35 147 Top-Down Mass Spectrometric and Microscopic Investigations of the Structures and Interactions of Amyloidogenic Proteins, Catherine E. Costello, Roger Theberge, Zhenning Hong, Xiaobin Xu, Sandrine Voilard-Bourgoin, Giuseppe Infusini, Yan Yan Liu, Ruiyi Ren, Lawreen H. Connors, Martha Skinner, Vickery Trinkaus-Randall, Mark E. McComb, Boston University School of Medicine

11:00 148 Recent Advances in Atomic Mass Spectrometry and its Increasing Role in Omics Sciences, David W. Koppenaal, Pacific Northwest National Laboratory

11:25 Presentation of EAS Award for Outstanding Achievements in the Fields of Analytical Chemistry

11:30 149 Pushing the Limits of LC/MS Sensitivity and Throughput for Biomarker Discovery and Verification, Richard D. Smith, Pacific Northwest National Laboratory

Digital Media in Cultural Heritage: New Preservation Technologies
Organized in cooperation with New York Conservation Foundation
Chair: Gwynne Ryan, Hirshhorn Museum and Sculpture Garden

Tewksbury

9:00 150 Trends in the Conservation of Time-Based Media, Gwynne Ryan, Hirshhorn Museum and Sculpture Garden


9:50 152 Phosphor and Dust: Simulating the Cathode Ray Tube for Computer and Video Media, Ian Bogost, The Georgia Institute of Technology

10:15 Break

10:35 153 Contemporary Art and Phenomena of Technological Obsolescence: Digitizing Artist’s Films, Cecile Dazord, Clotile Boust, Centre de Recherche et de Restauration des Musées de France

11:00 154 Standardization, Preservation, and Access to Cultural Heritage Digital Data, Fenella G. France, Library of Congress


HPLC Retention Mechanism
Chair: Yuri Kazakevich, Seton Hall University

Bridgewater

9:00 156 Reversed-Phase Liquid Chromatography: Filling in the Details with Molecular Simulation, Mark Schure, The Dow Chemical Company, Jake Rafferty, J. I. Siepmann, University of Minnesota

9:40 157 Instability of Water-Hydrophobic Interface in Reversed-Phase HPLC: The Role of Air Adsorption, Alexander Y. Fadeev, Frank Bernardoni, Seton Hall University

10:20 Break

10:40 158 Retention Mechanisms and Retention Theory, Yuri Kazakevich, Seton Hall University

11:20 159 Mechanism of Enantioseparation on Macrocyclic Antibiotic Phases, Nelu Grinberg, Shengli Ma, Sherry Shen, Heewon Lee, Nathan Yee, Chris Senanayake, Boehrienger Ingelheim, David Bell, Supelco/Sigma-Aldrich

Solving Cold Cases: Experiences from the Vidocq Society
Chairs: Diana G. Johnson and Kimberly Gorel, New Jersey State Police

Hillsborough

9:00 160 Introduction to the Vidocq Society and the John List Case, Edward Gaughan, Keystone Intelligence Network

9:50 161 Murder Sub-Types and Analysis, Richard Walter, Vidocq Society

10:40 Break
11:00  162 Forensic Death Investigation, Jack Ingle, Office of the Chief Medical Examiner
       163 Withdrawn by the author.

Imaging Techniques in Surface and Interface Analysis
Chair: Andrew V. Teplyakov, University of Delaware

Westfield

9:00  164 Integrity of Functional Self-Assembled Monolayers on Hydrogen-Terminated Silicon-on-Insulator Wafers, Fangyuan Tian, Chaoying Ni, Andrew V. Teplyakov, University of Delaware

9:40  165 Concentration Effects and Surface Dynamics in Benzene Carboxylic Acid Monolayers at the Liquid-Graphite Interface, Gina Florio, St. John’s University

10:20  Break

10:40  166 A Depth Profiling and Heterogeneity Investigation of Polymers, Including Multi-Laminate and Conductive, Frank S. Weston, Mustafa Kansiz, Varian, Georgia A. Arbuckle-Keil, Rutgers University, Isao Noda, Procter & Gamble

11:20  167 Surface Chemistries to Increasing Surface Stress for Improving Signal-to-Noise Ratio of Microcantilever Sensors, Haifeng Frank Ji, Drexel University

New Advances in Instrumentation and Pharmaceutical Analysis
Chair: Joseph Medendorp, Merck

Ballroom West

9:00  168 Transmission Raman for Robust Content Uniformity Analysis, Darren Andrews, Matthew Bloomfield, Cobalt Light Systems, Gary McGeorge, Bristol-Myers Squibb, Pavel Malousek, Science and Technology Facilities Council


9:40  170 Evaluation of Drug Release from HPMC-Based Matrix Tablets by Near-Infrared Chemical Imaging, Weiyong Li, NIRvation

10:00  171 Tablet Identification using an FT/Near-Infrared Integrating Sphere with Principal Component Analysis, Frank S. Weston, Varian

10:20  Break

10:40  172 Dynamic Measurement of Blend Uniformity with a Diode Array Near-Infrared Spectrometer, Yan Wang, Bruker Optics

11:00  173 Determination of Figures of Merit for Near-Infrared and Powder X-Ray Diffraction by Net Analyte Signal Analysis for a Solid Dosage System of an Amorphous Dispersion with (Spiked) Residual Crystallinity, Ryanne N. Palermo, Steven M. Short, Carl A. Anderson, James K. Drennen III, Duquesne University, Hung Tian, Hoffmann-La Roche

11:20  174 Practical Considerations for Rapid and Accurate Stereoregional Assignments using Vibrational Circular Dichroism, Peng Qiu, Yingru Zhang, Michael Reilly, David Wang-Iverson, Adrienne Tymiaik, Bristol-Myers Squibb

Gas Chromatography: An Old Friend with New Tricks
Chair: Barry Parker, Colgate-Palmolive

Princeton

9:00  175 Polar and Highly Polar Ionic Liquid Capillary Columns, Leonard Sidisky, Yizeng Ni, Greg A. Baney, James L. Desorce, Katherine Stenerson, Supelco/Sigma-Aldrich

9:20  176 Rethinking Gas Chromatography, Brian G. Rohrbach, Infometrix, John A. Crandall, Falcon Analytical, Carl E. Rechsteiner, Chevron

9:40  177 Minimizing False Positive Results in High-Throughput Urinary Drug Screening using GC/TOF/MS and a Novel Target Identification Algorithm, Kurt Thaxton, Almsco International

10:00  178 Comparing Carrier Gases for Capillary Gas Chromatography, Leonard Sidisky, Greg A. Baney, Supelco/Sigma-Aldrich

10:20  Break

10:40  179 Determination of Ethylene Glycol and Diethylene Glycol in a Sorbitol Solution, Terri T. Christison, Brian de Borba, Jeffrey S. Rohrer, Dionex

11:00  180 Determination of Phthalic Acid in Snow and Rain by GC and GC/MS, Yuegang Zuo, Bin Men, University of Massachusetts

11:20  181 Withdrawn by the author.

Counterfeit Pharmaceutical Detection using Vibrational Spectroscopy
Chairs: Tom Brueggemeyer and Mark R. Witkowski, US Food & Drug Administration

Ballroom Center

9:00  182 Rapid Screening for the Detection of Counterfeit Products in China - Past, Present and Future, Richard S. Jackson, NIRIRIR Consulting

9:30  183 Pharmaceutical Counterfeit Detection and Product Authentication using Portable Near-Infrared (NIR) and Raman Spectrometers, Ravi Kalyanaraman, Bristol-Myers Squibb

10:00  184 The use of Rapid Spectroscopies for Anti-Counterfeit Testing, Neville Broad, Abbott Laboratories

10:30  Break

10:50  185 Challenges Encountered in Counterfeit Narcotic Drug Analysis: A Case Study from a Pharmaceutical Industry Perspective, Seetha Viswanathan, Jennifer Giordano, Purdue Pharma

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td>187</td>
<td>Analysis of Pesticide Residues in Honey Bee Pollen and Wax Comb</td>
<td>Brian D. Etizer, Kimberly A. Stoner, Connecticut Agricultural Experiment Station</td>
</tr>
<tr>
<td>9:30</td>
<td>188</td>
<td>Abrin Analysis by ELISA, Christina Robb, Connecticut Agricultural Experiment Station</td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td>189</td>
<td>Chocolate Archaeology: Analytical Chemistry of Precolumbian Vessels</td>
<td>William Hurst, The Hershey Company</td>
</tr>
<tr>
<td>10:30</td>
<td></td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>10:50</td>
<td>190</td>
<td>Pesticide Analysis in Apples and Coffee using QuEChERS Method and GC/MS</td>
<td>Karyn M. Usher, Kelsey M. Smith, Mackenzie L. Lauro, West Chester University</td>
</tr>
<tr>
<td>11:20</td>
<td>191</td>
<td>The Perception of Varietal Aroma in Wine</td>
<td>Terry E. Acree, Gavin Sacks, Cornell University</td>
</tr>
</tbody>
</table>

**Tuesday Poster Session: Problem Solving Through Better Chromatography**

**Poster Area in the Exhibit Hall**

<table>
<thead>
<tr>
<th>Time</th>
<th>Poster #</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00-2:00</td>
<td>192</td>
<td>Automated Gas Chromatography Fraction Collection using a Gerstel Multi-Column Switching System and a Cryo-Cooled Megabore Capillary Column Trap</td>
<td>Emerilis Casado-Rivera, Lawrence P. Mink, Cynthia R. Leslie, Dow Chemical</td>
</tr>
<tr>
<td>12:00-2:00</td>
<td>193</td>
<td>A Flexible Sample Introduction System for GC and GC/MS</td>
<td>Jeff Sheriff, Lindsey Pyron, Doug Meece, Anne Jurek, EST Analytical</td>
</tr>
<tr>
<td>12:00-2:00</td>
<td>194</td>
<td>Static Headspace Extraction/Gas Chromatography (SHE/GC) of Polar Solvents using Ionic Liquids (IL) as Matrix</td>
<td>Michael Sithersingh, Nicholas H. Snow, Seton Hall University</td>
</tr>
<tr>
<td>12:00-2:00</td>
<td>195</td>
<td>Determination of Cholinergic Agents and Related Substances using a Reagent-Free Ion Chromatography System</td>
<td>Richard Kornfeld, Pranathi Perati, Jeffrey S. Rohrer, Dionex</td>
</tr>
<tr>
<td>12:00-2:00</td>
<td>196</td>
<td>Determination of 2-Ethylhexanoic Acid Impurity in Clavulanate Active Pharmaceutical Ingredient using a Reagent-Free Ion Chromatography System</td>
<td>Richard Kornfeld, Brian de Borba, Jeffrey S. Rohrer, Dionex</td>
</tr>
<tr>
<td>12:00-2:00</td>
<td>197</td>
<td>Simultaneous Determination of Gamma-Hydroxybutyric Acid (GHB) and Gamma-Butyrolactone (GBL) in Beverages</td>
<td>Anne Shearrow, German Bogenschuetz, Metrohm USA</td>
</tr>
<tr>
<td>12:00-2:00</td>
<td>198</td>
<td>Analysis of Airborne Particulate Matter using PILS/IC</td>
<td>Anne Shearrow, Jay Gandhi, Peter Jones, Metrohm USA</td>
</tr>
<tr>
<td>12:00-2:00</td>
<td>199</td>
<td>Trace-Level Determination of Perfluorinated Compounds in Water using Suppressed Ion Chromatography with Inline Matrix Elimination</td>
<td>Hari Subramaniam, Jay Gandhi, Metrohm USA</td>
</tr>
</tbody>
</table>

**Tuesday Poster Session: Analytical Problem Solving with HPLC Applications**

**Poster Area in the Exhibit Hall**

<table>
<thead>
<tr>
<th>Time</th>
<th>Poster #</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00-2:00</td>
<td>200</td>
<td>Determination of the Anhydrosugars Levo-glucosan, Mannosan, and Galactosan in Aerosols</td>
<td>Jay Gandhi, German Bogenschuetz, Metrohm USA</td>
</tr>
<tr>
<td>12:00-2:00</td>
<td>201</td>
<td>Trace-Level Determination of Bromate in Drinking Water by Direct-Injection Ion Chromatography and Suppressed Conductivity Detection</td>
<td>Jay Gandhi, Metrohm USA, Chunlong (Carl) Zhang, University of Houston</td>
</tr>
<tr>
<td>12:00-2:00</td>
<td>202</td>
<td>Withdrawn by the author.</td>
<td></td>
</tr>
<tr>
<td>12:00-2:00</td>
<td>203</td>
<td>Approaches for Optimizing Preparative Separations using Supercritical Fluid Chromatography</td>
<td>Jo-Ann M. Jablonski, Kenneth J. Fountain III, Steven M. Collier, Damian Morrison, Waters</td>
</tr>
<tr>
<td>12:00-2:00</td>
<td>204</td>
<td>Supercritical Fluid Chromatography for Compound Purification in Drug Discovery</td>
<td>Dawn Sun, Dauh-Rung Wu, Peng Li, Leslie Leith, Arvind Mathur, Balu Balasubramanian, Bristol-Myers Squibb</td>
</tr>
<tr>
<td>12:00-2:00</td>
<td>205</td>
<td>Effect of Cetyltrimethylammonium Bromide on Electroosmotic and Electroophoretic Mobility in Capillary Electrophoresis</td>
<td>Jinmo Huang, James Distefano, The College of New Jersey</td>
</tr>
<tr>
<td>12:00-2:00</td>
<td>206</td>
<td>The Investigation of Supercritical Fluid Chromatography (SFC) for the Support of Small Peptide Synthesis and Impurity Resolution</td>
<td>Michael B. Hicks, Douglas B. Moore, Atsu Apedo, Yingru Zhang, David Wang-Iverson, Adrienne Tymiaik, Bristol-Myers Squibb</td>
</tr>
<tr>
<td>12:00-2:00</td>
<td>207</td>
<td>Simultaneous Estimation of Atorvastatin Calcium, Ramipril, and Aspirin in Capsule Dosage Form by HPTLC</td>
<td>Pranathi Perati, Jeffrey S. Rohrer, Dionex</td>
</tr>
</tbody>
</table>

**Notes:**
- Withdrawn by the author.
- Partially withdrawn by the author.
Tuesday Poster Session: HPLC: Columns for Specific HPLC Analysis

Poster Area in the Exhibit Hall

12:00-2:00  212 Micellar High-Pressure Liquid Chromatography Separation and Partition Model for Hormones and Prostaglandins, Jelena Drizenovic, Guoxiu Wei, Deepi Varma, Susan Jansen-Varnum, Temple University

12:00-2:00  213 A Separation Ion-Pair HPLC Method for Hormones and Prostaglandins, Guoxiu Wei, Jelena Drizenovic, Deepi Varma, Susan Jansen-Varnum, Temple University

12:00-2:00  214 Investigation of the Effect of Pressure and Liophiolic Mobile Phase Additives on Chromatographic Parameters for Small Molecules and Proteins using Ultra High-Pressure Liquid Chromatography, Alexey Makarov, Rosario LoBrutto, Paul Karpinski, Novartis, Christos Cristodoulatos, Stevens Institute of Technology

12:00-2:00  215 Impact of System Pressure on Gradient-Delay Volume, Matthew Gallitto, John F. Kennedy High School, Eduardo Rogatsky, Daniel T. Stein, Albert Einstein College of Medicine

Tuesday Poster Session: Science Education: Investing in the Future

Poster Area in the Exhibit Hall

12:00-2:00  224 Development of Two HPLC Methods for High-Throughput Aerosol Testing, Zhaoying Zhang, Eugene R. Reynolds, Prabodh Wijetunge, MicroDose Therapeutics

12:00-2:00  225 Modifying Separation Selectivity by Selection of Fused-Core® Particle Bonded Phases, William L. Johnson, Timothy J. Langlois, Stephanie A. Schuster, Advanced Materials Technology, Thomas J. Waeghe, MAC-MOD Analytical

12:00-2:00  226 Evaluation and Performance Comparison of HPLC Columns with Sub-2-µm and Fused-Core® Particles for Ultra-Fast Liquid Chromatography, Xin Chen, Mark J. Mulvihill, Lifu Ma, OSI Pharmaceuticals

12:00-2:00  227 Physical Characterization and Critical Evaluation of Kinetex Core-Shell Technology and Related Columns, Cody Vinci, Jared S. Baker, Amber Moore, Luis A. Colon, SUNY Buffalo

12:00-2:00  228 Withdrawn by the author.

12:00-2:00  229 High-Resolution Separation and Quantitation of N-linked Glycans from mAb Glycoproteins, Beth L. Gillece-Castro, Thomas E. Wheat, Kim Van Tran, Kenneth J. Fountain III, Waters

12:00-2:00  230 New Generic Approach for HPLC Analysis: The Modern Silica-Based HPLC Columns; SiliaChrom® Series, Mark Clark, Charles Levesque, Vincent Bedard, Francois Beland, Silicycle

12:00-2:00  231 Utilizing a Novel Organic/Inorganic Hybrid C18 Column for Efficient Method Development Over a Wide pH Range, Noriko Shoji, Takashi Sato, Chie Yokoyama, Takatomo Takai, Naohiro Kuriyama, YMC Co.

12:00-2:00  232 Characterization and Evaluation of a Novel C18 Column Based on Organic/Inorganic Hybrid Silica for High-Performance Liquid Chromatography, Noriko Shoji, Takashi Sato, Chie Yokoyama, Yayoi Hiyoshi, Akiko Kashida, Takatomo Takai, Naohiro Kuriyama, YMC Co.

12:00-2:00  233 Expanding the Capabilities of a C18 Bonded Phase by the Addition of a Pentafluorophenyl (PFP) Group, Carl L. Zimmerman, Thomas J. Waeghe, Robert T. Moody, MAC-MOD Analytical

12:00-2:00  234 3-µm Zenix™ SEC for Ultra High-Resolution and Fast MAb and Protein Separation, Matthew George, Xiaotao Zhou, Helen Gu, Xueying Huang, Sepax
Tuesday Poster Session: 2010 Student Awardees

Poster Area in the Exhibit Hall

12:00-2:00

129 Study of the BMIM-PF_6: Acetonitrile Binary Mixture as a Solvent for Electrochemical Studies Involving CO₂, Anthony M. Rizzuto, Rachel L. Pennington, Karl D. Sienert, Eion University

12:00-2:00

240 Absolute Measurement of Internal Volume Changes Inside the Pulse Dampener: Discrepancy Between Delay and Dwell Volumes, Zheng Zheng, Middlebury College, Eduard Rogatsky, Daniel T. Stein, Albert Einstein College of Medicine

12:00-2:00

241 The Effects of Ambient Processing Conditions on the Exciton Lifetime of Poly 3-Hexylthiophene using Femtosecond Upconversion Fluorescence Spectroscopy, Lindsey Klinge, SUNY - Purchase College, Matthew Sfeir, Brookhaven National Laboratory

12:00-2:00

242 Determination of Elemental Fingerprints of Beer Samples by using Inductively Coupled Plasma Mass Spectrometry (ICP/MS), Nazia Mahmood, Yi He, Nicholas D. Petraco, John Jay College

12:00-2:00

243 The QuEChERS Method as a Sample-Preparation Technique for Analysis of Pesticide Residue in Apples and Coffee via GC/MS, Kelsey Smith, Karyn Usher, Mackenzie L. Lauro, West Chester University

12:00-2:00

244 Improving Performance on Parallel Plate High-Field Asymmetric Ion Mobility Spectrometry Devices, Alice L. Pilo, Mark E. Ridgeway Jr., Alessandra L. Ferzoco, Gary L. Glish, University of North Carolina - Chapel Hill, Desmond Kaplan, Melvin A. Park, Bruker Daltonics

Tuesday Poster Session: 2010 Student Awardees

Chair: Peter Johnson, 3M Company

Sponsored by Agilent Technologies

Honoring Brian A. Bidlingmeyer

Science EAS Award for Outstanding Achievements in Separation Science

Chair: Peter Johnson, 3M Company

Tuesday Afternoon, November 16, 2010

EAS Award for Outstanding Achievements in Separation Science

Honoring Brian A. Bidlingmeyer

Sponsored by Agilent Technologies

Chair: Peter Johnson, 3M Company

Ballroom West

2:00 Presentation of EAS Award for Outstanding Achievements in Separation Science

2:05 245 The Role of Electrostatic Interactions in Chromatographic Separations, Brian Bidlingmeyer, Agilent Technologies

2:35 246 Practical Aspects of High-Performance Column Selection in Liquid Chromatography: Superficially Porous or Sub-Two Micron (STM) Particles?, Ronald E. Majors, Agilent Technologies

3:05 247 Improving HPLC Column Selection and System Performance, Richard A. Henry

3:35 Break

3:55 248 Protein Chromatography with Really Sharp Peaks by using Silica Colloidal Crystals, Mary J. Wirth, Bingchuan Wei, Purdue University

4:25 249 Extreme Sample Preparation: Extremely Efficient Versus Extremely Tedious, Peter R. Johnson, 3M Company

Plastics and Synthetic Polymers in Cultural Heritage: Recent Advances in Identifying and Monitoring Deterioration Organized in cooperation with New York Conservation Foundation

Chair: Tom Learner, The Getty Conservation Institute

Tewksbury

2:00 250 An Overview of Analytical Techniques used for Identifying and Characterizing Plastics in Cultural Heritage, Tom Learner, Rachel Rivenc, The Getty Conservation Institute

2:30 251 Sick POLymers in the POLYclinic: Conservation Research of Plastics at ICN, Thea van Oosten, Netherlands Institute for Cultural Heritage

3:00 252 Detecting Polymer Oxidation with Dosimeters for Sensing Volatile Peroxides, Paul M. Whitmore, Muditha D. Senarath-Yapa, Carnegie Mellon University

3:30 Break

3:50 253 Accelerated Deterioration of Injection-Molded Cellulose Acetate Plasticized with Triphenyl Phosphate, Odile Madden, Smithsonian Institute


Quality-by-Design Approach to Analytical Development

Chair: Oscar Liu, Merck

Ballroom Center

2:00 255 Quality-by-Design for Analytical Methods in the Pharmaceutical Industry (from Candidate Inception to Marketed Product), Rosario LoBrutto, Novartis

2:30 256 Quality-by-Design for Dissolution Methods: A Development Perspective, William E. Bowen, Merck

3:00 257 Quality-by-Design for Dissolution Methods: A Commercialization Perspective, Kimberly Gallagher, Melissa Steinbeiser, Merck

3:30 Break

3:50 258 A Practical Approach in the Structure Elucidation of Degradation Products for New Pharmaceutical Drug Candidates when Multi-Dimensional HPLC/MS can get the Job Done, Angel R. Díaz, Alex Opio, Pfizer

4:20 259 Performance-by-Design LC Method Development, Oscar Liu, Tina Masiuk, Justin Pennington, Honggen Zhang, Zhenyu Wang, Brent Donovan, Merck

November 2010
Trace Analysis in Forensic Chemistry  
**Sponsored by New Jersey Association of Forensic Scientists**  
**Chair: Thomas Brettell, Cedar Crest College**

**Hillsborough**

2:00 260 The Application of Single Crystal X-Ray Diffraction to Investigate the Structure of Forensic Microcrystal Tests, **Matthew R. Wood**, New Jersey State Police, Roger A. Lalancette, Hugh W. Thompson, Rutgers University, Thomas A. Brettell, Cedar Crest College

2:40 261 A Study to Monitor the Oxidation of Nitrates to Nitrites Over Time, Michelle L. Schmidt, Cedar Crest College, Vincent J. Desiderio, NJ State Police

3:00 262 Collecting Quality FT/IR Spectra of Suspicious White Powders in a Sealed Cell, **Brooke W. Kamrath**, The City University of New York, Pauline E. Leary, Smiths Detection, John A. Reffner, John Jay College

4:20 263 Forensic Analysis of Triacetone Triperoxide (TATP), **Michael Sigman**, University of Central Florida

Chemical Reactions at Surfaces  
**Chair: Gina Florio, St. John’s University**

**Westfield**

2:00 264 Quantification of the Copper Nanostructure Formation on H-Terminated Silicon with Thermal Desorption, **Jia-Ming Lin**, Kathryn Perrine, Andrew V. Teplyakov, University of Delaware

2:30 265 Model Catalyst Surface Dynamics on Subpicosecond Timescales, **Nicholas Camillone III**, Brookhaven National Laboratory

3:00 266 Analysis of Bath Chemistry Control Methodology in Electrochemical Metallization, **Boli Zhou**, BZ Plating Process Solution

3:50 267 Chemistry and Charge Transfer Across Interfaces, **Robert Opila**, University of Delaware

4:20 268 Designing Organometallic Precursors for Thin and Ultra-Thin Barrier Film Deposition: Analysis of Pros and Cons for Ligand Design and Reactive Surface Functionalization, **Andrew V. Teplyakov**, University of Delaware

Raman Spectroscopy: From the Laboratory to the Process Line  
**Arranged in conjunction with the Coblentz Society**  
**Chair: Ian R. Lewis, Kaiser Optical Systems**

**Bridgewater**

2:00 269 Using Computational Modeling to Improve Biomedical Raman Microscopy, **Rohit Bhargava**, Anil Kodali, Matthew Schulmerich, University of Illinois

2:30 270 Investigation of Orally Inhaled and Nasal Drug Products using Chemically Specific Particle Sizing (CSPS), **Linda H. Kidder**, E. Neil Lewis, Janie Dubois, Kenneth S. Haber, Malvern Instruments

3:00 271 Application of Raman Spectroscopy to Enable Rapid Scale-Up of Pharmaceutical Co-Crystals, **Sachin Lohani**, Merck

3:30 272 Monitoring Pharmaceutical Reaction Chemistry with Raman Spectroscopy, **Gregory Gervasio**, James Rydzak, GlaxoSmithKline

4:20 273 Achieving Process Knowledge via Improvements in *In-Situ* Raman Sampling and Data Analysis, **Jan R. Lewis**, Kevin L. Davis, Sean Gilliam, David J. Strachan, Maryann E. Cuellar, Kaiser Optical Systems

Mass Spectrometry: A Tool for Analysis of Biologics, Pharmaceutical, and Environmental Samples  
**Chair: Landon Greene, Bristol-Myers Squibb**

**Ballroom East**

2:00 274 The Study of Protein Conformation in Solution via Direct Sampling by Desorption Electrospray Ionization Mass Spectrometry, **Hao Chen**, Zhixin Miao, Shiyong Wu, Ohio University

2:20 275 Distinguishing Among Three Luteolin Glycoside Isomers by using Host-Guest Chemistry and LC/MS/MS, **Canan Ozer**, Kean University

2:40 276 LC/MS Analysis of FDA Approved Drugs that Inhibit Cancer Cell Growth, **Samantha M. Mahmoud**, Gil Ramanathan, Kean University

3:00 277 Multi-Mycotoxin Analyses, Including Cyclopiazonic Acid, in Various Cereals by Mini-Column LC/MS/MS, **Perry A. Martos**, University of Guelph

3:20 278 Analysis of Fuels using Atmospheric Pressure GC/MS, **Douglas M. Stevens**, Waters

4:00 279 Using ICP/OES and ICP/MS to Meet the Requirements of Trace Elemental Analysis in Pharmaceutical Products, **Craig Seeley**, Doug Sears, Thermo Fisher Scientific

4:20 280 USP Metals Determination in Drug Products and Excipients using ICP/MS, **Lee Davidowski**, Zoe Grosser, PerkinElmer

What Does it Take to Run a Laboratory: Current Issues  
**Chair: Dennis Swijter, International Flavors and Fragrances**

**Bedminster**

2:00 281 Challenges of Building the Best Analytical Team, **Robert Geise**, BASF Catalysts

2:25 282 Getting the Most from Your Analytical Dollar – Building Successful Customer/Supplier Relationships, **Sherri L. Bassner**, Intertek Analytical Sciences

2:50 283 Motivating Analytical Staff in the Face of Large Routine Sample Loads, **George Reiner**, Danielle DiNallo, International Flavors and Fragrances

3:15 284 Keeping Capabilities Current and Running within a Limited Capital Budget, **Marina Despotopoulou**, Arkema

4:00 285 Same Time Next Year: Adapting to the Faster Pace of Organizational Change, **Richard R. Durand Jr.**, Gregory V. Pace, Sun Chemical

4:25 286 The Only Real Value of Analytical Services, **Jonathan Chun**, Alliance Technologies
Wednesday Morning, November 17, 2010

EAS Award for Outstanding Achievements in Near-Infrared Spectroscopy
Honoring James B. Reeves III, US Department of Agriculture
Sponsored by FOSS NIRSystems
Chair: Charles M. Zapf, McCormick

Ballroom East
9:00 287 How “Good” Is My NIR Calibration?
Tony Pietrantonio, Caltest
9:50 289 Preprocessing of NIR Spectra: Conditions for When is it Advantageous in Partial Least Squares and Multiple Linear Regression Calibrations, Stephen R. Delwiche, US Department of Agriculture
10:15 Break
10:35 290 Attempts at Understanding all of the Factors Involved in Diffuse Spectroscopy, and Evaluating a Simple Method for Correcting for Variations in Path Length, Karl Norris
11:00 291 Use of Near-Infrared Diffuse Reflectance Spectroscopy to Measure Soil Properties, Greg W. McCarty, US Department of Agriculture
11:25 Presentation of EAS Award for Outstanding Achievements in Near-Infrared Spectroscopy
11:30 292 A Career in Near-Infrared Spectroscopy: From the Front of the Cow (Forages) Through the Center (Odoriferous) to the Rear (Really Messy and Stinky) and Beyond. Lessons Still to be Learned, James B. Reeves III, US Department of Agriculture

Chemometrics for Chemical Sensing
Chair: Karl Booksh University of Delaware

Bridgewater
9:00 293 Fusing NIR and other Spectra for Quality Assurance of Pharmaceuticals, Steve D. Brown, Wangdong Ni, University of Delaware, Maureen Lanan, Biogen IDEC, Mike L. Koenigbauer, AstraZeneca
9:30 294 Stacked Principal Component Regression for the Enhanced Analysis of HPLC and UV/Vis Spectral Data: Undergraduate Research at Salisbury University, Robert D. Luttrell, Christopher M. Simms, Patrick C. Riley, Salisbury University
10:00 295 Preprocessing of Ultraviolet Resonance Raman (UVRR) Spectra for Multi-Variate Analysis, Renee Juli, Olayinka Oshokoya, John V. Simpson, University of Missouri
10:30 Break
10:50 296 Chemometric Analysis of Two-Dimensional Gas Chromatograms for the Analysis of Gulf Oil Spills, Gregory J. Hall, Glenn S. Frysinger, US Coast Guard Academy

Vibration and Spins: Spectroscopic Analysis of Materials
Chair: Chanda Yonzon, Merck

Tewksbury
9:00 298 Cap-IR: A New Sample Stage for IR Spectroscopy, John R. Sowa Jr., Seton Hall University, Eleanor Ojinnaka, Irvington High School, Percy Takiqi, West Orange High School
9:20 299 Visible Attenuated Total Reflectance for High-Strength Pigment Analyses: Comparison to MIR and NIR, Kathryn A. Lee, Dan C. Rich, Sun Chemical
9:40 300 Heavy Metal Content in Commercial Pet Foods Analyzed by ICP and ICPMS, Ralph H. Obenauf, Vanaja Sivakumar, Patricia Atkins, SPEX CertiPrep
10:00 301 Two-Dimensional NMR Correlation Experiments in the Gas Phase, Alexander A. Marchione, DuPont
10:20 Break
10:40 302 HT/NMR: A Novel Quality Control Tool for Determining Concentration and Water Content of Pharmaceutical Repository Compounds, Yingzi Wang, Stella Huang, Sandra Matson, Moneesh Chatterjee, Michael Reily, Bristol-Myers Squibb
11:00 303 Development of a Rapid Small-Scale NMR Method for Metabolite Identification in Drug Discovery, Stella Huang, Kim Johnson, Vikram Roongta, Xiaohong Liu, Yue-Zhong Shu, Griff Humphreys, Michael Reily, Bristol-Myers Squibb

A “Trip” Through the Forensic Realm
Chair: David Trimble, Swarthmore College

Hillsborough
9:00 305 Forensic Multi-Target Screening and General Unknown Screening on a LC/MS/MS System with Automatic Library Searching for Compound Identification, Pauline J. Vollerhaus, Andre Schreiber, AB SCIEX, Tania Sasaki, Avee Laboratories
9:30 306 Analysis of Opiates in Urine and Blood using Solid Phase Microextraction-GC/MS, Cierra Green, College of New York, Nicholas H. Snow, Seton Hall University
10:00 307 Simultaneous Separation and Detection of Illicit Drugs and their Salt Forms using LC/MS, Sergio A. Guazzotti, Kate Preston, Guifeng Jiang, Thermo Fisher Scientific
10:30 Break
10:50 308 Quantitative Analysis of Salvinorin A using Comprehensive Two-Dimensional Gas Chromatography/Time-of-Flight Mass Spectrometry (GCxGC/TOFMS), Brian B. Barnes, Nicholas H. Snow, Seton Hall University
11:20 309 Forensic Analysis by SERS: Drugs, Poisons, Explosives, and More, Stuart Farquharson, Frank Inscore, Chetan Shende, Atanu Sengupta, Hermes Huang, Real-Time Analyzers

Advanced Materials and Nanoparticles Characterization
Chair: Eric Garfunkel, Rutgers University

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td>Trends in the Behavior of Inorganic Compounds by Laser Desorption Mass Spectrometry, John Allison, Alexander E. Clark, The College of New Jersey</td>
</tr>
<tr>
<td>9:30</td>
<td>Atom Probe Tomography Applications to Advanced Materials Characterization, Hyun Woo (Howie) Jin, ExxonMobil</td>
</tr>
<tr>
<td>10:00</td>
<td>A New Method for Photoluminescence Quantum Yield Measurements of Novel Materials, Karen E. Gall, Horiba Scientific</td>
</tr>
<tr>
<td>10:30</td>
<td>Break</td>
</tr>
<tr>
<td>11:20</td>
<td>Methanol Electrooxidation Mediated by a [Ni/Al-Carbonate]-Based Hydrotalcite in Alkaline Medium, Derrick Baker, Jeremiah Hicks, Uche Udeochu, University of Maryland-Eastern Shore, Nana Karikari, Jason Ganley, Dharmaraj Raghavan, Charles Hosten, Howard University</td>
</tr>
</tbody>
</table>

New Horizons In-Situ and Remote Sensing
Chair: Richard NGuyen, Merial Limited

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td>Gas Sensing using Robust Mid-Infrared Technology in Elmina, Ghana, Ekua N. Bentil, Anna P.M. Michel, James A. Smith, Claire F. Gmachl, Princeton University, Charles L.Y. Amuah, Moses J. Eghan, University Cape Coast</td>
</tr>
<tr>
<td>9:30</td>
<td>A Quantum Cascade Laser-Based Glucose Sensor for Diabetics, Anna P.M. Michel, Claire F. Gmachl, Princeton University</td>
</tr>
<tr>
<td>10:00</td>
<td>Break</td>
</tr>
<tr>
<td>10:20</td>
<td>Electrochemical Investigation of Quercetin Interactions with DNA and its Monomer Units at Quercetin Doped Carbon Paste Electrode and Glassy Carbon Electrode, Ailing Zhou, Omowunmi Sadik, Xueying He, SUNY Binghamton</td>
</tr>
</tbody>
</table>

Quantitative Vibrational Analysis, Remembering Connie Paralusz
Chair: Jane Wu, TMAS

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td>Remembering the Contributions of Connie Paralusz, Jane Wu, TMAS</td>
</tr>
<tr>
<td>9:10</td>
<td>Applications of Target PLS, Boiana O. Budevksa, DuPont</td>
</tr>
</tbody>
</table>

Innovations in Chromatographic Stationary Phases: Solid Core to Ion Exchange
Chair: Hui (Viviane) Zhao, Bristol-Myers Squibb

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td>Hafnia and Zirconia Monolithic Structures for Chromatographic Applications, Stefan Vujicic, Luis A. Colón, SUNY Buffalo</td>
</tr>
<tr>
<td>9:40</td>
<td>Application of Novel Fused-CoreTM Particle Column in 2D RP/RP MS Analysis of Biological Samples, Eduard Rogatsky, Daniel T. Stein, Albert Einstein College of Medicine</td>
</tr>
<tr>
<td>10:00</td>
<td>Orthogonal Selectivity by New Generation of Core Shell Materials, Lawrence Y. Loo, Jason Anspach, Mike Chitty, Tivadar Farkas, A. Carl Sanchez, Thuylinh Tran, Phenomenex</td>
</tr>
<tr>
<td>10:20</td>
<td>Break</td>
</tr>
<tr>
<td>10:40</td>
<td>HPLC Analysis of siRNAs, Mirlinda Biba, Christopher J. Welch, Merck, Joe P. Foley, Drexel University</td>
</tr>
<tr>
<td>11:00</td>
<td>High Resolution Polypeptide Separations on Ascentis Express Peptide ES-C18, Xiaoning Lu, Hillel Brandes, Wayne Way, Carmen Santasania, Richard A. Henry, Supelco/Sigma-Aldrich</td>
</tr>
<tr>
<td>11:40</td>
<td>Polyanilinitetitanium(IV)arsenate: A New Composite Cation Exchanger Synthesis, Characterization and its Environmental Applications, Syed Ashfaq Nabi, Mohammad Shahadat, Rani Bushra, Aligarh Muslim University</td>
</tr>
</tbody>
</table>

Wednesday Poster Session: Diverse Solutions to Solve Analysis Problems

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00</td>
<td>Stability of Single-Element and Anion Solution Standard Reference Materials, Therese A. Butler, Michael R. Winchester, National Institute of Standards and Technology</td>
</tr>
<tr>
<td>12:00</td>
<td>Food Authenticity Determination by Total Organic Carbon Isotope Analysis using a Combined TOCCavity Ringdown Spectrometer</td>
</tr>
</tbody>
</table>
12:00-2:00 334 Structural Parameters for Petroleum Heavier Ends Feed Stocks by NMR Spectroscopic Techniques, Veena Bansal, Ravindra Kumar, M. B. Patel, A. S. Sarpal, Indian Oil Corporation

12:00-2:00 335 Evaluation of Calibration Standard Preparation for Developing Near-Infrared Blending Models, John V. Spira, Boyong Wan, Bristol-Myers Squibb

12:00-2:00 336 Determination of Inorganic Anion Impurities in a Water Insoluble Pharmaceutical by Ion Chromatography with Suppressed Conductivity Detection, Kirk Chassaniol, Brian de Borba, Khalil (Ginger) Divan, Jeffrey S. Rohrer, Dionex

12:00 - 2:00 337 New Ultra High-Resolution Mass Sensors for Development of More Efficient Column Packing Materials, Larry Unger, Kerri-Ann Hue, Patrick O'Hagan, Particle Sizing Systems

12:00-2:00 338 An Automated Measuring System for Density, Refractive Index, pH, Conductivity and Color, Wallace Harvey, Tore Fossum, Mettler Toledo

12:00-2:00 339 A Titration System for the Automated Determination of Iodine Absorption of Carbon Black, Tore Fossum, John Griffiths, Mettler Toledo

12:00-2:00 340 Comparative Study of Structural, Optical and Luminescent Properties of Plastic (PMMA) and Water Based Liquid Scintillators Doped with Cobalt Benzene-1,2-Dithiolate and Wavelength Shifter, TPB, Mohit P. Patel, Susan Jansen-Varnum, Temple University

12:00-2:00 341 Globalization of Spectroscopic Data Access, David A. Joyce, Steve Best, Thermo Fisher Scientific

12:00-2:00 342 Keeping Your Karl Fischer Under Control, Selecting an Appropriate Water Standard, Doug Clark, Don Hobs, Supelco/Sigma-Aldrich

12:00-2:00 343 New Advances in Pure Gas Delivery, Steven Yu, Tracey Jacksier, Air Liquide

12:00-2:00 344 Why Worry about Running out of Gas on your Critical Processes?, Tracey Jacksier, Air Liquide

12:00-2:00 345 77Se-NMR Spectroscopy of Selenoproteins, Fei Li, Sharon Rozovsky, University of Delaware

12:00-2:00 346 Development of Automated Analytical Solutions to Support Radiolabeled Compounds at Merck, Rosemary Marques, Pamela Rizos, Claire Lee, Steven Staskiewicz, Herb Jenkins, Roy Helmy, Vincent Antonucci, Merck

12:00-2:00 347 Determination of Cocaine Contamination on Paper Currency Across the US East Coast, Yuegang Zuo, Philip Langley, Ratthisa D. Phomsopha, University of Massachusetts

12:00-2:00 348 Methanol Electrocataytlic Oxidation Mediated by a [Ni/Al-Carbonate]-Based Hydrotalcite in Alkaline Medium, Jeremiah Hicks, Uche Udeochu, University of Maryland

---

**Wednesday Poster Session: New Advances in Pharmaceutical Analysis**

**Poster Area in the Exhibit Hall**

12:00-2:00 349 Analysis of Various Polyethylene Glycol (PEG) Species Including Simultaneous Free PEG and PEGylated Proteins with HPLC and Charged Aerosol Detection, Marc Plante, Thomas Villasenor, Christopher Crafts, Bruce Bailey, Ian Acworth, David Clark, ESA - A Dionex Company

12:00-2:00 350 Determination of Melamine and Its Analogs in Inactive Pharmaceutical Ingredients by Ultra Performance Liquid Chromatography Coupled with Tandem Mass Spectrometry, Jane Xu, Jeremy C. Shia, John Martin, Diane M. Diehl, Waters

12:00-2:00 351 Correlation of Physical and Chemical Stability in an Oral Dosage Form with Light Sensitive Permeation Enhancer, Karen T. Toscano, Seema Tomer, Donna Abarca, Novartis

12:00-2:00 352 Improving the Quantitation of Unknown Impurity Analysis using Dual Gradient HPLC with Charged Aerosol Detection, Christopher Crafts, Marc Plante, Bruce Bailey, Dave Clark, Ian Acworth, ESA - A Dionex Company

12:00-2:00 353 CE Separation of the Clopidogrel Entanomic Impurity and Other Related Compounds using Anionic Cyclodextrins as Chiral Selectors, Hui He, Kung-I Feng, Merck

12:00-2:00 354 A Simpler and Faster HPLC Assay of Two Drug Products to Treat Tuberculosis, Jeffrey S. Rohrer, Suparerk Tutkkeeree, Dionex

12:00-2:00 355 Development of a Sensitive LC/MS Method for the Determination of a Potential Genotoxic Impurity in an Active Pharmaceutical Ingredient for Phase I Development, George Wang, Thomas F. Hooker, Ling Zhang, Frank P. Tomasella, Bristol-Myers Squibb

12:00-2:00 356 Simultaneous Estimation of Nebivolol Hydrochloride and S-Amlodipine Besylate by High-Performance Thin Layer Chromatography, Bhavesh H. Patel, K B Institute of Pharmaceutical Education and Research

12:00-2:00 357 USP 467 Headspace Residual Solvent Assay with a HT3TM Headspace Instrument, Roger N. Banksley, Tom Hartlein, Tammy Rellar, Teledyne Tekmar

12:00-2:00 358 DESI/MS as a Tool for Obtaining Quick Cleaning Validation and Swab Recovery Results, Michelle A. Baron, Laura Sharon, Li Li, Merck

12:00-2:00 359 Incoming Packaging Component Identification using a Hand-Held Raman Spectrometer, Jeremy A. Linoski, Christopher D. Brown, Robert C. Brush, Thermo Scientific Portable Raman, Christopher Crafts, Bruce Bailey, Dave Clark, Ian Acworth, ESA - A Dionex Company

12:00-2:00 360 Evaluation of the Precision of Dual-Opposite Injection Capillary Zone Electrophoresis and Comparison with Conventional Capillary Zone Electrophoresis, Donna M. Blackney Beckett, Joe P. Foley, Drexel University
Wednesday Poster Session: Sample Prep Techniques: Get it Right Before You Get it Wrong

**Poster Area in the Exhibit Hall**

12:00-2:00 368 Quantifying the Impact of Operator Error in Pipetting, A. Bjoern Carle, Doreen Rumery, Aaron Davis, George W. Rodrigues, Artel

12:00-2:00 369 Errors in Liquid Delivery - The Importance of Laboratory Conditions on Pipetting, A. Bjoern Carle, Doreen Rumery, Aaron Davis, Geoff Sawyer, George W. Rodrigues, Artel

12:00-2:00 370 Vitamin D and Metabolites: Evaluation of Supported Liquid Extraction (SLE) prior to LC/MS/MS Analysis, Lee D. Williams, Rhys D. Jones, Helen Lodder, Steve Jordan, Richard Calverley, Claire Desbrow, Gary Dowthwaite, Biotage

12:00-2:00 371 Extraction of THC and Metabolites from Urine and Plasma using Supported Liquid Extraction (SLE) prior to LC/MS/MS Analysis, Lee D. Williams, Rhys D. Jones, Helen Lodder, Steve Jordan, Richard Calverley, Claire Desbrow, Gary Dowthwaite, Biotage

12:00-2:00 372 Inductively Coupled Plasma/Mass Spectrometry (ICP/MS) on Pharmaceutical Compounds: Sample Preparation Considerations, Alice T. Granger, Cindy Qin, John McCaffrey, Rinaldo Saraceno, Boehringer Ingelheim

12:00-2:00 373 Microwave Assisted Digestion on Mixed Batched Samples in Disposable Vessels, Dean R. Schmidt, Milestone

12:00-2:00 374 Semi-Open Focused Microwave Methodology for Fast Sequential Sample Preparation, Bill MacLuckie, David Barclay, CEM Corporation

12:00-2:00 375 New Modern and Efficient SPE Products for Environmental and Drugs of Abuse Applications: SiliaPrep™ CleanENVI and SiliaPrep™ CleanDRUG, Mark Clark, Vincent Bedard, Charles Levesque, Steeve Potvin, Francois Beland, SiliCycle

12:00-2:00 376 Automated Benchtop System for Serial Dilution, Fredrick D. Foster, Edward A. Pfannkoch, John R. Stuff, Gerstel

**Wednesday Afternoon, November 17, 2010**

**EAS Award for Outstanding Achievements in Chemometrics Honoring Johan A. Westerhuis, University of Amsterdam**

**Sponsored by Eigenvector Research**

**Chair: Paul Gemperline, Eastern Carolina University**

**Bridge**

2:00 377 Kinetic Modeling of Batch Slurry Processes, Paul J. Gemperline, John Blanton, Chun Hsieh, David Joiner, East Carolina University, Theresa Kirshner, University of Tennessee, Mary Ellen McNally, Ronald M. Hoffman, DuPont

2:30 378 A History of Multi-Block Methods, Age K. K. Smilde, Swammerdam Institute

3:00 379 Issues on Batch Multi-Variate Statistical Process Control, Alberto J. Ferrer-Riquelme, José M. González-Martínez, Universidad Politécnica de Valencia, José Camacho-Páez, Universidad de Granada

3:30 Break


4:20 Presentation of EAS Award for Outstanding Achievements in Chemometrics

4:25 381 Chemometric Tools in the Human Systems Biology, Johan A. Westerhuis, University of Amsterdam

**Near-Infrared Spectroscopy**

**Chair: Howard Mark, Mark Electronics**

**Ballroom East**

2:00 382 NIR in PAT/QBD: Finally, We Check Out the Man Behind the Curtains!, Emil Ciurczak, Doramaxx Consulting

2:25 383 Using Averaging Effectively, Dave Hopkins, NIR Consultant

2:50 384 Applications of NIR and SIMCA for Product Development and Process Optimization, Debbie A. Peru, Colgate- Palmolive

3:15 Break

3:35 385 Supervised Principal Component Analysis as a Quantitative Method in Pharmaceutical Analysis, Weyong Li, NIRvation

4:00 386 NIR Spectroscopy - Just One of Many Analytical Tools for PAT, Bradley Diehl, Pfizer
### New York Section of the Society for Applied Spectroscopy Gold Medal Award

**Honoring Cecil Dybowski, University of Delaware**

**Chair:** Seetha Viswanathan, Purdue Pharma LP

Table: New York Section of the Society for Applied Spectroscopy Gold Medal Award

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:00</td>
<td>Presentation of the New York Section of the Society for Applied Spectroscopy Gold Medal Award</td>
</tr>
<tr>
<td>2:05</td>
<td>Investigation of Materials with Magnetic Resonance Spectroscopy, Cecil Dybowski, University of Delaware</td>
</tr>
<tr>
<td>2:35</td>
<td>Single-Molecule Spectroscopy for Quantitative Analysis of Interfacial Processes, Joel M. Harris, University of Utah</td>
</tr>
<tr>
<td>3:05</td>
<td>Applications of Spectroscopy to Chemistry and Materials Forensics, Dale L. Perry, Lawrence Berkeley National Laboratory</td>
</tr>
<tr>
<td>3:35</td>
<td>Break</td>
</tr>
<tr>
<td>3:55</td>
<td>Spectroscopic Investigation of Thin Diffusion Barrier Films: Formation, Properties and their Manipulation at the Atomic Scale, Andrew V. Teplyakov, University of Delaware</td>
</tr>
<tr>
<td>4:25</td>
<td>X-Ray Diffraction and Analysis of Pharmaceutical Solids, Qi Gao, Bristol-Myers Squibb</td>
</tr>
</tbody>
</table>

### Forensic Microscopy IV “What is it? Who does it?”

**Chair:** Tom Kubic, John Jay College

### Plastics, Acid Vapors; Historic and Contemporary Optical Media

**Chair:** John Scott, New York Conservation Foundation

### Electrochemistry in Drug Development, Design, and Testing

**Chair:** J. Faye Rubinson, Georgetown University

### Innovations in Teaching Analytical Chemistry

**Chair:** Caryl Fish, St. Vincent College

### Chromatographic Method Development: Motion, Speed and Velocity

**Chair:** Julia Vasta-Russell, AstraZeneca
### American Microchemical Society Benedetti-Pichler Award

Honoring Joel M. Harris, University of Utah  
Chair: David Butcher, Western Carolina University

#### Ballroom Center

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td>Chemical Sensors Based on Nanocrystallite-Xerogel Hybrids, Frank V. Bright, SUNY Buffalo</td>
<td></td>
</tr>
<tr>
<td>9:30</td>
<td>The Role of Isolated Silanols in Tailing and What We Can Do About It, Mary J. Wirth, Josh J. Newby, Purdue University</td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td>Molecular Adsorption/Desorption at Single Atom Nanowires Prepared by Self-Limiting Electrochemical Processes, Paul W. Bohn, Ping Shi, University of Notre Dame, Hsin-Yu Lin, National Tsing Hua University</td>
<td></td>
</tr>
<tr>
<td>10:30</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>10:50</td>
<td>Chemistry in Droplets 50 Years after Benedetti-Pichler, Robin L. Garrell, UCLA</td>
<td></td>
</tr>
<tr>
<td>11:20</td>
<td>Presentation of the American Microchemical Society Benedetti-Pichler Award</td>
<td></td>
</tr>
<tr>
<td>11:25</td>
<td>Confocal Raman Microscopy of Particles in Liquids: Microchemical Analysis in Femtoliter Volumes, Joel M. Harris, University of Utah</td>
<td></td>
</tr>
</tbody>
</table>

### Industrial Microscopy

Chair: Ronald L. Mueller, West

#### Hillsborough

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td>Industrial Applications of Microscopy in an Analytical Laboratory, John R. Reffner, Dow Chemical</td>
<td></td>
</tr>
<tr>
<td>9:30</td>
<td>Image Analysis of EDS and Backscatter SEM Images of Pharmaceutical Tablets, Robert A. Carlton, GlaxoSmithKline</td>
<td></td>
</tr>
</tbody>
</table>
Fast HPLC Analysis
Chair: Landon Greene, Bristol-Myers Squibb

Princeton
9:00  438  Routine Real-Time LC Analysis on the Manufacturing Floor: Utilizing UPLC for At-Line and On-Line Quantitative Analysis of Complex In-Process Material, Craig H. Dobbs, Waters
9:30  439  A Fast, Generic and Systematic Approach to UHPLC Impurity Method Development, Peter I. Tattersall, Li Li, Qinggang Wang, Bristol-Myers Squibb
10:00  440  Where is Higher Pressure Liquid Chromatography Going?, Bob Giuffre, Agilent Technologies
10:30  Break
10:50  441  Fused-Core™ Particles and Sub-2 Micron Pores for Fast Separation using HPLC and UPLC in Pharmaceutical Development, Naijun Wu, Theresa K. Natishan, Merck
11:20  442  Conversion of Legacy HPLC Methods to UHPLC in a QC Laboratory, Qinglin Tang, Jinjian Zheng, Neil Dias, Robert Markovich, Abu Rustum, Merck

A Variety of Sample Preparation in Today’s Laboratory
Chair: Ani Sarkahian

Westfield
9:00  443  Importance of Glassware Treatment to Sample Preparation in HPLC Analysis: A Case Study, Xiande (Andy) Wang, Vijaya Bandlamudi, Sai Pothineni, Lori Alquier, Cordis
9:20  444  The Development of Single-Use, Biocompatible SPME Fibers for Solvent Desorption, Katherine Stenerson, Robert E. Shirey, Craig Aurband, Leonard Sidisky, Young Chen, Supelco/Sigma-Aldrich, Dajana Vuckovic, Janusz Pawliszyn, University of Waterloo
9:40  445  Automated SPE for EPA 500 and 600 Series Methods, Richard E. Carlson, David E. Knowles, Brian C. Dorich, Eric S. Francis, Brett J. Murphy, Bruce E. Richter, Dionex
10:00  446  Expanding the Limits of Closed-Vessel Microwave Digestion for Today’s High-Throughput Metals Laboratory, Timothy J. Michel, Milestones
10:20  Break
10:40  447  Preparation of Catalyst and High Silica Samples by Borate Fusion for ICP/OES Analysis: Method Development and Results, Philippe Daigle, Chantal Audet, Dominique Levesque, John A. Anzelmo, Corporation Scientifique Claissse
11:00  448  Development of Instrumentation for Real-Time Monitoring of Green House Gases, Smruni Ragunath, New Jersey Institute of Technology
11:20  449  Withdrawn by the author.

Chemometrics - Methods, Calibration Transfer and Applications
Chair: Karl Booksh, University of Delaware

Bridgeport
9:00  450  Calibration Transfer from Pharmaceutical Powder Mixtures to Compacts using the Prediction Augmented Classical Least Square (PACLS) Method, Zengqi Shi, Carl A. Anderson, James K. Drennen III, Benoit Igne, Duquesne University
10:00  453  The Chemometrics Role in Making Chromatography Plug and Play, Brian G. Rohrback, Infometrix
10:20  Break
10:40  454  Fuel Analysis: 18 Chemical and Physical Properties in less than 5 Minutes, Anywhere, Stuart Farquharson, Carl Brouillette, Wayne Smith, Michael Donahue, Frank Inscore, Real-Time Analyzers
11:20  456  Quality-by-Design: A Case Study to Address Design Space Development, Yan Shen, Jyh-Ming Shoung, Stan Altan, Johnson & Johnson

Bioanalytical Tools and Sample Preparation Methodology
Chair: Michael Hicks, Bristol-Myers Squibb

Ballroom West
9:25  458  Quantitative Proteomics as a Tool for Characterization of Upstream Processes, Tyler Carlage, Li Zang, Yelena Lyubarskaya, Biogen Idec, William S. Hancock, Northeastern University
10:15  Break
10:35  460  Application of Separation Techniques and Spectroscopic Methods in Developing a Bio-Monitoring Tool for Marine Pollution using the Mussel, Mytilus Edulis, Rahul Manmode, Chetankumar Malepati, David Ryan, University of Massachusetts-Lowell
11:00  461  High Recovery HybridSPE™ Sample Preparation for Bioanalysis by LC/MS, Xiaoning Lu, Michael Ye, Supelco/Sigma-Aldrich
Thursday Afternoon, November 18, 2010

New York Microscopical Society Ernst Abbe Award Honoring Dale Newbury, National Institute of Standards and Technology
Chair: John Reffner, John Jay College

1:00 463 Improving X-Ray Microanalysis Starts with Accurate Peak Identification and Good Background Fit, Del Redfem, EDAX
1:30 464 Silicon Drift Detector EDS Analysis at High-Throughput: The Evolution of SD Detector Technology, Ted Juzwak, Bruker-Nano
2:00 465 Event Streamed Spectrum Imaging - High-Performance Concurrent Collection of X-Ray and Electron Information, Scott D. Davilla, 4pi Analysis
2:30 Break
2:50 466 A Microcalorimeter Energy Dispersive Spectrometer for High-Resolution X-Ray Nano- and Microanalysis, Robin Cantor, Star Cryoelectronics
3:20 Presentation of the New York Microscopical Society Ernst Abbe Award

Managing Outsourcing
Chair: Pankaj Shah, Bristol-Myers Squibb

1:00 468 Analytical R&D Global Growth Story, Balasaheb Deshmukh, Freddy Van Damme, Paul O’Connor, Tong Sun, Bharat Singh, Sandeep Dhingra, The Dow Chemical Company
1:40 469 Challenges in Outsourcing Product Development, Jacqueline Erickson, GlaxoSmithKline
2:20 Break
2:40 470 Selective Integration - A Case Study of Off-Shoring Drug Product Stability Support to Asia, Pankaj Shah, Bristol-Myers Squibb
3:20 471 Challenges with Bioanalytical Method Transfers to CROs, Dennis Garner, Bristol-Myers Squibb

Vibrational Spectroscopy in the Biomedical Field
Sponsored by New England Section of the Society for Applied Spectroscopy
Chair: Edita Botonjic-Sehic, Morpho Detection

1:00 472 Multi-Variate Modeling of NIR Data for Prediction of Human Embryonic Reproductive Potential, Mark Henson, Lucy Botros, Kevin Judge, Pieter Roos, Denny Sakkas, Molecular Biometrics
1:30 473 Spectroscopic Imaging of Human Tissue: A Promise Fulfilled, Thomas J. Tague Jr., Bruker Optics
2:00 474 Combined Intravascular Near-Infrared Spectroscopy and Ultrasound for Characterization of Lipid Core Coronary Plaque, Stephen T. Sum, Sean P. Madden, Michael Burka, Zhihua He, James E. Muller, InfraRed-X
2:30 Break
2:50 475 Chemical Imaging for Automated Histopathology, Rohit Bhargava, Rohith K. Reddy, Jason Ip, Michael J. Walsh, University of Illinois
3:20 476 Raman Spectroscopy and Novel Chemistry Applied for Sensitive Immunoassays, Neal Siegel, Sword Diagnostics

Dissolution Applications in Pharmaceutical Analysis
Chair: Judy Lin, Bristol-Myers Squibb

1:00 477 Dissolution Case Studies with Flow-Through Cell, Geoffrey N. Grove, Sotax, Samir Haddouchi, SPS Pharma Services
1:25 478 A Study of the Effect of Type and Concentration of Buffer Salt in Media on the Dissolution of an HPMC Capsule Formulation using UV Fiber Optic Spectroscopy, Lili Lo, Xujin Lu, David Lloyd, Bristol-Myers Squibb
1:50 479 Development of a Robust and Discriminating Dissolution Method for a BCS Class II Prodrug Compound, Limin Zhang, Priyanka Rao, Judy Lin, Yueer Shi, Brent Kleintop, Bristol-Myers Squibb
2:15 Break
2:35 480 In-Situ Dissolution Monitoring of Pharmaceutical Tablets using ATR/FTIR, Abe Kassis, John S. Sowa, Jr., Drushali Bhawtanka, Seton Hall University
3:00 481 Dissolution Method Development using USP Apparatus IV for Modified Release Tablet, Mary Pan, Novartis
3:25 482 A Unique Approach to ASTM Compliant Dissolution Testing for use with USP Apparatus #1 and #2, Raymond Majeski, Quality Lab Accessories

Supercritical Fluid Chromatography: Current Progress
Chair: Julie Wolff, Merck

1:00 483 A Highly Automated 5 Pump (3 Gradient, 2 Isocratic), 4 Detector (2 UV, ELSD & MS) Supercritical Fluid Chromatography (SFC) System for Chiral and Achiral Purification in Drug Discovery, Qing Ping Han, Mark J. Hayward, Lundbeck
1:30 484 Systematic Evaluation of New Chiral Stationary Phases for Supercritical Fluid Chromatography using a Standard Racemate Library, Zainab Pirzada, Christopher J. Welch, Xiaoyi Gong, Mirlinda Biba, Wes Schafer, Merck
2:00 Break
2:20 485 Parallel Chromatography: Its Role and Impact in Supporting Discovery Chemistry via SFC, Reversed-Phase HPLC, and Normal Phase HPLC, Thierry D. Mann, Melissa Grondine, Joseph Twomey III, Novartis
Meetings in Conjunction with the 2010 EAS

—— Meeting of ASTM International Committee E13 ——
on Molecular Spectroscopy and Separation Science
Monday, November 15, 2010
Doubletree Somerset Hotel
Library Room (Mezzanine Level)

<table>
<thead>
<tr>
<th>Meeting</th>
<th>Times</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>E13.01.01</td>
<td>10:00am – 11:00am</td>
<td>Development and Evaluation of New Chiral and Achiral Columns for the Next Generation of Supercritical Fluid Chromatography Applications, Paul M. Lefebvre, Jeffrey P. Kiplinger, Averica Discovery Services, Michael J. Rego, Matthew Przybycieł, David Kohler, ES Industries</td>
</tr>
<tr>
<td>E13.01.03</td>
<td>11:00am – Noon</td>
<td>Task Group</td>
</tr>
<tr>
<td>E13.01</td>
<td>2:00pm – 3:00pm</td>
<td>UV/VIS/Luminescence Spectroscopy</td>
</tr>
<tr>
<td>E13.03</td>
<td>3:00pm – 4:00pm</td>
<td>Infrared and Near Infrared Spectroscopy</td>
</tr>
<tr>
<td>E13.94</td>
<td>4:00pm – 5:00pm</td>
<td>Terminology</td>
</tr>
<tr>
<td>E13.11</td>
<td>5:00pm – 7:00pm</td>
<td>Multivariate Analysis</td>
</tr>
<tr>
<td>1:50</td>
<td>1:50 – 2:00</td>
<td>Spectral DSC: Probing Phase Transformations with Coupled Raman and Differential Scanning Calorimeter (DSC), Stephen Medlin, John Richmond, Bruker Optics</td>
</tr>
<tr>
<td>2:15</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>2:35</td>
<td>2:35 – 3:00</td>
<td>Development and Characterization of Novel Liposomal Formulation of Coumarin Epoxide, Dheivanai Lakshmanan, Jeevaprakash Ganapathy, Sasikanth Reddy College of Pharmacy, Kalaiselvi Balasubramanian, Umasankar Ramasamy, Novel Laboratories</td>
</tr>
<tr>
<td>3:00</td>
<td>3:00 – 4:00</td>
<td>Solid Dispersions of Poorly Soluble Flavoring Ingredients, Matt Sillick, Christopher Gregson, Firmenich</td>
</tr>
</tbody>
</table>

For more information, please contact E13 Staff Manager, Joe Koury, at (610) 832-9804 or jkoury@astm.org.
Nexera UHPLC is Here!

At 19,000 psi, Shimadzu’s New Nexera is the World’s Only No Compromise UHPLC

Shimadzu’s passion has always been to improve performance, ease of use and flexibility for all HPLC environments. That passion continues with Nexera, the next era in UHPLC, which offers the reliability, versatility, and superior basic performance for all applications.

Nexera features:

- World’s fastest injection (10 second cycle time)
- Near-zero carryover (0.0015% without rinsing)
- Maximum resolution with the widest pressure/flow range (130MPa up to 3mL/min)
- Excellent injection reproducibility (0.25% area %RSD)
- Modular design enables numerous system configurations

And the list goes on!

For the ultimate in speed, versatility, ruggedness and reproducibility, there’s only one: Nexera UHPLC.

You have demands. Shimadzu delivers.

Learn more about Shimadzu’s products. Call (800) 477-1227 or visit us online at www.ssi.shimadzu.com/NEXERA

Order consumables and accessories on-line at http://store.shimadzu.com

Shimadzu Scientific Instruments Inc.,
7102 Riverwood Dr., Columbia, MD 21046, USA
2010 EAS Awards

EAS Award for Outstanding Achievements in the Fields of Analytical Chemistry, Sponsored by Bristol-Myers Squibb

On Tuesday, November 16, 2010, Dr. Richard D. Smith, Pacific Northwest National Laboratory, will receive the 2010 EAS Award for Outstanding Achievements in the Fields of Analytical Chemistry.

Dr. Richard D. Smith is a Battelle Fellow and Chief Scientist in the Biological Sciences Division and Director of Proteomics Research at Pacific Northwest National Laboratory (PNNL). His research interests have broadly involved the development and application of advanced methods and instrumentation for applications in biological research. Dr. Smith was responsible for the development of the first combinations of capillary supercritical fluid chromatography and capillary electrophoresis with mass spectrometry. His recent work has emphasized the development and application of capabilities for making ultra-sensitive and high performance proteomics and metabolomics measurements. Dr. Smith is Director of the NIH Biomedical Technology Resource Center for Integrative Biology and the U.S. Department of Energy High Throughput Proteomics Facility at PNNL. He is an adjunct faculty member of the Department of Chemistry at Washington State University, the University of Utah, and the University of Idaho. Dr. Smith has presented more than 350 invited or plenary lectures at national and international scientific meetings, and is the author or co-author of more than 750 publications. Dr. Smith holds thirty-seven patents and has been the recipient of eight R&D 100 Awards, the 2003 American Chemical Society Award for Analytical Chemistry, and the 2009 HUPO Discovery Award in Proteomics Sciences.

EAS Award for Outstanding Achievements in Near Infrared Spectroscopy, Sponsored by FOSS NIRSystems

On Wednesday, November 17, 2010, Dr. James B. Reeves III, US Department of Agriculture, will receive the 2010 EAS Award for Outstanding Achievements in Near Infrared Spectroscopy.

Jim Reeves received his B.S degree in Chemistry in 1970 from the University of Maryland (With Honors), his PhD in Biochemistry from the University of Maryland in 1975 and a B.S. degree in Computer Science in 1984 from the University College of the University of Maryland.

On Monday, November 15, 2010, Dr. Cecil Dybowski, University of Delaware, will receive the 2010 EAS Award for Outstanding Achievements in Magnetic Resonance.

Cecil Dybowski is a professor in the Department of Chemistry and Biochemistry at the University of Delaware. His interests are in the application of nuclear magnetic resonance (NMR) and electron paramagnetic resonance to the study of solids and solid-like materials. He has published over 175 technical papers. He is the coauthor of three books: Transient Techniques in NMR of Solids (Academic Press), NMR Spectroscopy Techniques (Dekker), and the recently published Essential Data and Equations for a Course in Physical Chemistry (Pearson). He was an Associate Editor of Applied Spectroscopy for fourteen years and is currently an Associate Editor of the Encyclopedia of Analytical Chemistry. He is a member of the editorial boards of several journals.

He was a student of Professor Charles G. Wade at the University of Texas at Austin, where he earned the degree of Doctor of Philosophy in 1973 for studies of spin-lattice relaxation in thermotropic and cholesteric liquid crystals. After completing the Ph.D., he was a Research Fellow in Chemical Engineering at the California Institute of Technology, where he worked with Professor Robert W. Vaughan on the application of NMR to solids and semisolids such as elastomers.

In 1976, Dybowski joined the faculty of the University of Delaware. Early work from his laboratory focused on using NMR, EPR and FTIR spectroscopy to investigate molecules at the surfaces of heterogeneous catalysts, leading to characterization of a variety of catalyst systems, including the nature of hydrogen on metals supported on oxide surfaces, the nature of oxide-supported organometallic cluster catalysts, and the characterization of partial-oxidation catalysts. His studies of molecules absorbed in various zeolitic catalysts showed that molecules sorbed in these materials bind to counterions in a manner analogous to ion-molecule complexes in the gas phase. Early on, his laboratory began extensive studies of the spectroscopy xenon gas in confined spaces. Concurrently, Dybowski’s laboratory also focused on analyzing the deformation of polymer samples with NMR spectroscopy. Their technique of using the moments of the NMR line shape to determine structural features has been quoted in textbooks on NMR and polymers. Studies of conducting polymers with NMR spectroscopy provided clues to the nature of these systems.

Recently, studies have focused on the NMR spectroscopy of solids containing heavy-metal spin ½ nuclei such as 207Pb, 199Hg, and 110Sn. The project involves both measurement and prediction of the chemical shielding in various solid structures using state-of-the-art relativistic density functional calculations. Dybowski and his coworkers have identified a new mechanism of spin-lattice relaxation that applies to these heavy-metal nuclei.

Dybowski’s previous awards include the 1984 Spectroscopist of the Year from the Delaware Valley Section of the Society for Applied Spectroscopy, the 2008 Delaware Section Award of the American Chemical Society, as well as being named a Fellow of the Society for Applied Spectroscopy, a Fellow of the American Association for the Advancement of Science, and a Fellow of the American Institute of Chemists. He has been a distinguished visiting professor at several universities, including the University of Paris and the Jagiellonian University.

EAS Award for Outstanding Achievements in Magnetic Resonance, Sponsored by Bruker BioSpin and New Era Enterprises

On Tuesday, November 16, 2010, Dr. Cecil Dybowski, University of Delaware, will receive the 2010 EAS Award for Outstanding Achievements in Magnetic Resonance.

Cecil Dybowski is a professor in the Department of Chemistry and Biochemistry at the University of Delaware. His interests are in the application of nuclear magnetic resonance (NMR) and electron paramagnetic resonance to the study of solids and solid-like materials. He has published over 175 technical papers. He is the coauthor of three books: Transient Techniques in NMR of Solids (Academic Press), NMR Spectroscopy Techniques (Dekker), and the recently published Essential Data and Equations for a Course in Physical Chemistry (Pearson). He was an Associate Editor of Applied Spectroscopy for fourteen years and is currently an Associate Editor of the Encyclopedia of Analytical Chemistry. He is a member of the editorial boards of several journals.

He was a student of Professor Charles G. Wade at the University of Texas at Austin, where he earned the degree of Doctor of Philosophy in 1973 for studies of spin-lattice relaxation in thermotropic and cholesteric liquid crystals. After completing the Ph.D., he was a Research Fellow in Chemical Engineering at the California Institute of Technology, where he worked with Professor Robert W. Vaughan on the application of NMR to solids and semisolids such as elastomers.

In 1976, Dybowski joined the faculty of the University of Delaware. Early work from his laboratory focused on using NMR, EPR and FTIR spectroscopy to investigate molecules at the surfaces of heterogeneous catalysts, leading to characterization of a variety of catalyst systems, including the nature of hydrogen on metals supported on oxide surfaces, the nature of oxide-supported organometallic cluster catalysts, and the characterization of partial-oxidation catalysts. His studies of molecules absorbed in various zeolitic catalysts showed that molecules sorbed in these materials bind to counterions in a manner analogous to ion-molecule complexes in the gas phase. Early on, his laboratory began extensive studies of the spectroscopy xenon gas in confined spaces. Concurrently, Dybowski’s laboratory also focused on analyzing the deformation of polymer samples with NMR spectroscopy. Their technique of using the moments of the NMR line shape to determine structural features has been quoted in textbooks on NMR and polymers. Studies of conducting polymers with NMR spectroscopy provided clues to the nature of these systems.

Recently, studies have focused on the NMR spectroscopy of solids containing heavy-metal spin ½ nuclei such as 207Pb, 199Hg, and 110Sn. The project involves both measurement and prediction of the chemical shielding in various solid structures using state-of-the-art relativistic density functional calculations. Dybowski and his coworkers have identified a new mechanism of spin-lattice relaxation that applies to these heavy-metal nuclei.

Dybowski’s previous awards include the 1984 Spectroscopist of the Year from the Delaware Valley Section of the Society for Applied Spectroscopy, the 2008 Delaware Section Award of the American Chemical Society, as well as being named a Fellow of the Society for Applied Spectroscopy, a Fellow of the American Association for the Advancement of Science, and a Fellow of the American Institute of Chemists. He has been a distinguished visiting professor at several universities, including the University of Paris and the Jagiellonian University.
Jim has spent his entire career at the Agricultural Research Service of the US Department of Agriculture and started at the Beltsville Agricultural Research Center in 1978 working on the composition of ruminant feedstocks. His introduction to near-infrared spectroscopy (NIRS) came in 1984 when he started working with Dr. Timothy Blosser who uses NIRS for forage and soil analysis. When Dr. Blosser left a few years later, Jim took over the NIRS work and continued studies on animal feedstocks. While physically remaining at the same location, both the name of the lab (Ruminant Nutrition Laboratory) and direction of the laboratory changed gradually over a period of 15 years from ruminant feedstocks to ruminant wastes and eventually to more generally ruminant effects on the environment (Presently the laboratory is the Environmental Management and Byproducts Utilization Laboratory). Thus, Jim’s research has moved from what the cow eats (front end) to waste production (the back end) to waste disposal (the soil). Jim is also presently part of the Hydrology and Remote Sensing Laboratory at Beltsville.

Jim has authored or co-authored over 125 peer reviewed publications, with thesis, book chapters, etc. increasing the total to nearly 200 non-abstract publications. He was the chairman of the 8th International Diffuse Reflectance Conference (Chambersburg, PA, 1996), is presently the North American Editor for NIR News, serves on the Editorial Boards of The Open Spectroscopy and Open Agriculture Journals and The Journal of Analytical and Applied Pyrolysis, has taught courses on NIR spectroscopy in the United States, Italy, Mexico and Brazil and routinely reviews spectroscopically (near- and/or mid-infrared) oriented papers on subjects ranging from pharmaceuticals and foods to animal feeds, hydrology, grains, soils and remote sensing.

Present research interests are concentrated in three main areas: 1. The application of spectroscopy for the rapid determination of soil composition. This includes the investigation and evaluation of both different spectral ranges (visible, near-infrared and mid-infrared), sample presentation methods (diffuse reflectance, fiber-optics, etc.) and spectroscopic methodology (proximate versus remote sensing) to find the most efficient and economically method for the rapid determination of soil carbon content for carbon sequestration. 2. Chemometrics, specifically transfer of methods developed by the NIRS community using bench top spectrometers to the area of remote sensing and also the development of more rapid methods for development and automatic evaluation of calibrations. 3. The development of methods for the evaluation of feedstocks for Biochar and biofuel production at the farm level. Finally, an ongoing interest throughout Jim’s career has been how the reference methods used in agriculture influence the spectroscopic calibrations upon which so much time is spent developing and upon which so much may depend, e.g. carbon credits for carbon sequestration as measured by remote or proximate spectroscopic methods.

**EAS Award for Outstanding Achievements in Separation Science, Sponsored by Agilent Technologies**

On Tuesday, November 16, 2010, Dr. Brian A. Bidlingmeyer, Agilent Technologies, will receive the 2010 EAS Award for Outstanding Achievements in Separation Science.

Dr. Brian A. Bidlingmeyer received his undergraduate degree from Kenyon College where he graduated cum laude with Honors in Chemistry. He attended graduate school at Purdue University where he received a Ph.D. degree in Analytical Chemistry under Professor L.B. Rogers. While at Purdue, Brian was the first person to do ultra-high pressure liquid chromatography with his thesis work investigating LC behavior from 10,000 to 60,000psi. After graduating from Purdue, he began work at Amoco Research Center in Naperville, IL where he participated in the local technical societies and gave several scientific presentations. While at Amoco, Brian developed several key methods for insuring product quality using innovative separations. After Amoco, he went to work for Waters Associates, a firm specializing in separation technology. The company manufactured and sold HPLC instruments. At Waters, Brian started as an application chemist and over the years was involved in application-focused products. He also assumed ever-increasing levels of responsibility eventually becoming Vice-President and Technical Director for Waters Chromatography Division of Millipore Corporation. He was responsible for several business units including the Columns and Chemical Supplies business, the Application Development Group and the customer training business.

Eventually, Dr. Bidlingmeyer left Waters, and, bitten by the “entrepreneurial bug,” co-founded a new company, Cohesive Technologies. At Cohesive, Brian introduced the first commercial column based upon a porous zirconia substrate in partnership with the 3M Company. After Cohesive, Brian joined Sterling Winthrop Pharmaceuticals, a division of Eastman Kodak Company as an Assistant Director for the Analytical Sciences Division with his main focus on separation sciences. Brian remained at Sterling until the company was sold to Sanofi whereupon he changed jobs and moved to Rockland Technologies in Wilmington, DE. Hewlett Packard purchased Rockland in 1997 and in 1999, Agilent Technologies, Inc. was “spun off” from Hewlett Packard as a separate company. At Hewlett Packard/Agilent, Brian has had numerous assignments associated within the separation products business unit. He is now a senior R&D scientist in the Columns and Supplies Division.

Dr. Bidlingmeyer has made significant contributions to the practice and understanding of modern HPLC and, as a result of his pioneering work, has received numerous awards including the Heinrich Emmanual Merck Prize for contributions to Analytical Chemistry, the International Ion Chromatography Award for contributions to that field, the Millipore Innovation Award, an IR 100 Award for a new method for amino acid analysis (“PicoTag” method) and the 2003 Chromatography Forum of Delaware Valley Award for contributions to theory, instrumentation and applications of chromatography. He also was the award 2004 American Chemical Society (ACS) Delaware Section Award that recognizes conspicuous scientific achievement in an area of chemistry or chemical engineering by a Delaware Section Member.

Brian has been associated with HPLC for most of his professional career. Brian has worked in industry as a user of HPLC as well as for manufacturers of instruments and columns. Brian has developed and currently presents several short courses for various scientific groups in including the ACS and is on a number of scientific and journal advisory panels. He also serves on various organizing committees and is an associate editor of the Journal of Chromatographic Science where he writes as column on HPLC troubleshooting. Brian is currently the Chairman of the Separations Science and Separations Chemistry Subdivision of the American Chemical Society’s Analytical Division. Throughout his career, Dr. Bidling-
meyer has promoted the use of HPLC. He has published over 100 technical papers, authored one book on practical HPLC and edited another book on preparative chromatography. Brian's current research interests are in the areas of understanding separation mechanisms, practical problem solving of challenging applications and in developing new/improved commercial products.

**EAS Award for Outstanding Achievements in Chemometrics, Sponsored by Eigenvector Research**

On Wednesday, November 17, 2010, Dr. Johan A. Westerhuis, University of Amsterdam will receive the 2010 EAS Award for Outstanding Achievements in Chemometrics.

Johan Westerhuis started his Analytical Chemistry and Chemometrics education at Laboratory school in Groningen, and obtained his MSC in Chemometrics in the group of Prof. Kateman and Dr. Buydens in Nijmegen. He finished his PhD work in 1997 on Multivariate Statistical Modeling of the Pharmaceutical Process of Wet Granulation and Tableting using multiblock (path-) models at the University Centre for Pharmacy at the University of Groningen. After his PhD he worked one year in Canada as a postdoc at McMaster University, Hamilton, ON, with Prof. John MacGregor and Dr. Dora Kouri on batch process monitoring and multi-block methods. In 1998 he joined the Process Analysis & Chemometrics group, which is now the BioSystems Data Analysis group at the Universiteit van Amsterdam to work with Professor Age Smilde. He teaches statistics and biochemical data analysis at a bachelor and master level and supervises PhD students and postdoc’s in process analysis and metabolomics data analysis. Johan Westerhuis chaired the Dutch Chemometrics Society for several years and organized International Chemometrics Research Meetings (ICRM) in 2002 and 2006. Since 2005 he is the European editor of the Journal of Chemometrics and recently became the organizer of the data analysis interest group of the Metabolomics Society. His current research interest focuses on the analysis of metabolomics data especially in the field of human systems biology. He develops grey models to incorporate prior information of the biological system (e.g. in databases) in the analysis of complex metabolomics data.

**EAS Award for Outstanding Achievements in Mass Spectrometry, Sponsored by Thermo Fisher Scientific**

On Monday, November 15, 2010 Dr. Richard M. Caprioli, Vanderbilt University, will receive the EAS Award for Outstanding Achievements in Mass Spectrometry.

Richard M. Caprioli is the Stanley Cohen Professor of Biochemistry and Director of the Mass Spectrometry Research Center at Vanderbilt University School of Medicine. He is also currently Professor in the Departments of Chemistry and Pharmacology at Vanderbilt University. Dr. Caprioli received his B.S. in 1965 from Columbia University in New York, N.Y., his Ph.D. in 1969 in Biochemistry, also at Columbia University with Professor David Rittenberg. He did a one-year postdoctoral fellowship at Purdue University with Professor John H. Beynon. In 1970, he was appointed as Assistant Professor of Biochemistry at Purdue. In 1975, Dr. Caprioli moved to the University of Texas Medical School in Houston where he was Professor of Biochemistry and Molecular Biology and Director of the Analytical Chemistry Center until his move to Nashville in early 1998.

Professor Caprioli is interested in the use of mass spectrometry for the analysis of compounds in biological systems. Current work includes the use of electrospray and laser desorption ionization methods with biological tissues and samples. Applications have focused on the development of this instrumentation and associated methodologies to achieve ultra-high sensitivity detection of endogenous compounds (e.g., neuropeptides) in live animal systems. Recent work involves the development of Imaging Mass Spectrometry, a technique whereby molecular images of peptides, proteins, drugs and other compounds are localized in tissue sections with molecular weight specificity. This method involves molecular mapping of animal tissue through the production of ion images obtained from the analysis of mammalian tissue. Applications to specific research areas involve questions about certain spatial distributions of molecules within specific tissues, e.g., mapping proteins in cancer tissue. Specific applications include human glioblastomas, breast cancer, colorectal cancer and lung cancer.

Dr. Caprioli has been a member of the American Society for Mass Spectrometry since 1975; he served two years each as President of the Society and Vice-President for Programs. He is a member of the American Society for Biochemistry and Molecular Biology, the American Association for Cancer Research, and the American Chemical Society. Professor Caprioli has been the Editor-in-Chief of the *Journal of Mass Spectrometry* since 1990. He is currently co-editing several volumes and is Series Editor of *Encyclopedia of Mass Spectrometry*. He has published over 300 scientific papers, including three books. He holds more than 10 patents in scientific achievement. In 2003, Dr. Caprioli received the Thomson Medal Award from the International Mass Spectrometry Society for "for outstanding achievements in mass spectrometry and for distinguished service to international mass spectrometry." Dr. Caprioli is currently serving a 3-year term on the Board of Directors of the HUPO organization and has been a member of the Board of Directors of the US HUPO since its inception. He received the Field and Franklin Award from the American Chemical Society in April, 2006 for Outstanding Achievement in Mass Spectrometry. He has been named as one of the "Pioneers in Proteomics" by the National Institutes of Health.

**American Microchemical Society Benedetti-Pichler Award**

On Thursday, November 18, 2010, Dr. Joel M. Harris, University of Utah, will receive the American Microchemical Society Benedetti-Pichler Award.

Joel M. Harris is Distinguished Professor of Chemistry at the University of Utah, where he also holds an appointment in the Department of Bioengineering. Harris received a B.S. degree from Duke University and his Ph.D. from Purdue University. He was ap-
pointed to the faculty of the University of Utah in 1976. Harris’s research has focused on analytical chemistry and spectroscopy of trace-level species in liquids and at liquid/solid interfaces. He and his students have developed new measurement concepts in photothermal spectroscopy, analysis of multidimensional fluorescence and Raman spectroscopic data, confocal Raman microscopy, and quantitative single-molecule detection. They have applied these concepts to investigating liquid/solid interfaces, dispersed particles, and interfacial molecular transport, adsorption, and binding kinetics that govern chemical separations and analysis. Through these efforts, Harris has published over 200 research articles, chapters, and patents. Harris is Fellow of the American Association for the Advancement of Science and of the Society for Applied Spectroscopy. He was the recipient of an Alfred P. Sloan Fellowship, the Coblenz Award in Molecular Spectroscopy, the University of Utah Distinguished Research Award, the ACS Division of Analytical Chemistry Award in Chemical Instrumentation, the SAS New York Section Gold Medal Award in Spectroscopy, the Pittsburgh Analytical Chemistry Award, the Robert W. Parry Teaching Award, the ACS Utah Award in Chemistry, and the ACS Award in Analytical Chemistry. He served for 12 years as Editor-in-Chief of Applied Spectroscopy.

New York Microscopical Society Ernst Abbe Award

On Thursday, November 18, 2010, Dr. Dale Newbury, National Institute of Standards & Technology, will receive the New York Microscopical Society Ernst Abbe Award.

Dale Elwood Newbury received the Bachelor of Science in Metallurgy and Materials Science (summa cum laude, with Departmental and Interdepartmental Honors; with election to Phi Beta Kappa and Tau Beta Pi) from Lehigh University, Bethlehem, PA in 1969. He attended the University of Oxford (St. Catherine’s College) from 1969 – 1972 as a Marshall Scholar (awarded by the Parliament of the United Kingdom) and received the degree of Doctor of Philosophy in Metallurgy and Materials Science in 1972. In 1972 he joined the Metallurgy Division of the National Institute of Standards and Technology, Gaithersburg, MD (then known as the National Bureau of Standards) as a National Research Council Postdoctoral Fellow. In 1973 he became a member of the NIST research staff in the Microanalysis Research Group of the Center for Analytical Chemistry. In 1979 he became Group Leader of Microanalysis Research, serving in that capacity until 1994 when he was elected an NIST Fellow, which has enabled him to devote full time to scientific research, continuing to the present. His research interests include electron probe microanalysis, analytical electron microscopy, scanning electron microscopy, surface analysis, energy dispersive x-ray spectrometry, Monte Carlo electron trajectory simulation, computer-aided analysis, computer-aided imaging; and advanced materials research. He is the author or co-author of more than 350 journal publications; co-author of six books; co-editor of five books; and author/co-author of nine book chapters.


New York Section of the Society for Applied Spectroscopy Gold Medal Award

On Wednesday, November 17, 2010, Dr. Cecil Dybowski, University of Delaware, will receive the New York Section of the Society for Applied Spectroscopy Gold Medal Award.

Cecil Dybowski is a professor in the Department of Chemistry and Biochemistry at the University of Delaware. His interests are in the application of nuclear magnetic resonance (NMR) and electron paramagnetic resonance to the study of solids and solid-like materials. He has published over 175 technical papers. He is the coauthor of three books: Transient Techniques in NMR of Solids (Academic Press), NMR Spectroscopy Techniques (Dekker), and the recently published Essential Data and Equations for a Course in Physical Chemistry (Pearson). He was an Associate Editor of Applied Spectroscopy for fourteen years and is currently an Associate Editor of the Encyclopedia of Analytical Chemistry. He is a member of the editorial boards of several journals.

He was a student of Professor Charles G. Wade at the University of Texas at Austin, where he earned the degree of Doctor of Philosophy in 1973 for studies of spin-lattice relaxation in thermotropic and cholesteric liquid crystals. After completing the Ph.D., he was a Research Fellow in Chemical Engineering at the California Institute of Technology, where he worked with Professor Robert W. Vaughan on the application of NMR to solids and semisolids such as elastomers.

In 1976, Dybowski joined the faculty of the University of Delaware. Early work from his laboratory focused on using NMR, EPR and FTIR spectroscopy to investigate molecules at the surfaces of heterogeneous catalysts, leading to characterization of a variety of catalyst systems, including the nature of hydrogen on metals supported on oxide surfaces, the nature of oxide-supported organometallic cluster catalysts, and the characterization of partial-oxidation catalysts. His studies of molecules absorbed in various zeolitic catalysts showed that molecules sorbed in these materials bind to counterions in a manner analogous to ion-molecule complexes in the gas phase. Early on, his laboratory began extensive studies of the spectroscopy xenon gas in confined spaces. Concurrently, Dybowski’s laboratory also focused on analyzing the deformation of polymer samples with NMR spectroscopy. Their technique of using the moments of the NMR line shape to deter-
mine structural features has been quoted in textbooks on NMR and polymers. Studies of conducting polymers with NMR spectroscopy provided clues to the nature of these systems.

Recently, studies have focused on the NMR spectroscopy of solids containing heavy-metal spin \( \frac{1}{2} \) nuclei such as \(^{207}\text{Pb} \), \(^{199}\text{Hg} \), and \(^{119}\text{Sn} \). The project involves both measurement and prediction of the chemical shielding in various solid structures using state-of-the-art relativistic density functional calculations. Dybowski and his coworkers have identified a new mechanism of spin-lattice relaxation that applies to these heavy-metal nuclei.

Dybowski's previous awards include the 1984 Spectroscopist of the Year from the Delaware Valley Section of the Society for Applied Spectroscopy, the 2008 Delaware Section Award of the American Chemical Society, as well as being named a Fellow of the American Association for the Advancement of Science, and a Fellow of the American Institute of Chemists. He has been a distinguished visiting professor at several universities, including the University of Paris and the Jagiellonian University.

**2010 EAS Student Awards**

Sponsored by Pfizer, Inc.

EAS continues to actively support a Student Awards program to recognize scientific research by undergraduates. In the spring of each year, we encourage professors to identify Juniors in college who are already involved in research in the broad field of analytical chemistry. Nominations include appraisals of how the students handle the investigations, approach the problems, and get involved in the projects.

In 2010, five outstanding undergraduates have been selected to receive EAS Student Awards. Based on the recommendations from their professors, the following have been chosen from a very worthy field of candidates:

**Lindsey Klinge**  
Purchase College  
*Nominated by Professor Taina Chao*

**Nazia Mahmood**  
John Jay College  
*Nominated by Professor Yi He*

**Alice Pilo**  
University of North Carolina  
*Nominated by Professor Gary L. Glish*

**Anthony M. Rizzuto**  
Elon University  
*Nominated by Professor Karl Sienerth*

**Kelsey Smith**  
West Chester University  
*Nominated by Professor Karyn Usher*

The Governing Board of the 2010 EAS congratulates these awardees for their outstanding achievements.

*The Student Awardees’ posters will be presented on Tuesday, November 16, 2010 in the Poster Area in the Exhibit Hall from 12:00pm – 1:30pm.*
## 2010 EAS Short Courses

Complete descriptions of all EAS Short Courses are located in the Preliminary Program, which is available in the EAS Registration Area, and at the EAS Short Course Office.

### Two-Day Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>~ 2-Day Courses ~ Sunday - Monday 8:30am - 5:00pm (Holiday Inn)</th>
<th>Instructor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E10-01</td>
<td>Practical Gas Chromatography: Packed and Capillary Columns <em>(Dr. Robert Grob Memorial Course)</em></td>
<td>Dr. Eugene F. Barry, University of Massachusetts Lowell Dr. Mary A. Kaiser, DuPont Company</td>
</tr>
<tr>
<td>E10-02</td>
<td>LC/MS: Theory, Instruments, and Applications</td>
<td>Dr. Guodong Chen, Bristol-Myers Squibb Dr. Michael Balogh, Waters Dr. Ragu Ramanathan, Bristol-Myers Squibb Dr. Birendra Pramanik, Merck</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>~ 2-Day Courses ~ Monday - Tuesday 8:30am - 5:00pm (Holiday Inn)</th>
<th>Instructor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E10-12</td>
<td>Putting Organic Chemistry into Perspective - A Review of Sophomore Organic Chemistry</td>
<td>Dr. John R. Sowa, Seton Hall University</td>
</tr>
<tr>
<td>E10-21</td>
<td>Infrared Spectral Interpretation I + II <em>(combined course)</em></td>
<td>Dr. Brian C. Smith, Spectos Associates</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>~ 2-Day Courses ~ Tuesday - Wednesday 8:30am - 5:00pm (Holiday Inn)</th>
<th>Instructor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E10-23</td>
<td>The Analysis and Characterization of Protein Therapeutic Drugs</td>
<td>Mr. C. David Carr, Bioanalytical Technologies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>~ 2-Day Courses ~ Wednesday - Thursday 8:30am - 5:00pm (Holiday Inn)</th>
<th>Instructor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E10-31</td>
<td>Quantitative Analysis for Chromatographers</td>
<td>Dr. Gregory Slack, Clarkson University Dr. Nicholas Snow, Seton Hall University</td>
</tr>
<tr>
<td>E10-32</td>
<td>Troubleshooting Chromatographic Systems</td>
<td>Dr. Merlin K.L. Bicking, ACCT, Inc. Dr. Douglas E. Raynie, South Dakota State University</td>
</tr>
<tr>
<td>E10-33</td>
<td>PLAstics-State of the Art Techniques Important in Cleaning their Surfaces <em>(NEW)</em></td>
<td>Dr. Yvonne Shashoua, National Museum of Denmark Ms. Kathrine Segel, National Museum of Denmark</td>
</tr>
<tr>
<td>E10-34</td>
<td>How to Develop Validated HPLC Methods: Rational Design with Practical Statistics and Troubleshooting</td>
<td>Dr. Brian A. Bidlingmeyer, Agilent Technologies Dr. Stanley N. Deming, Statistical Designs</td>
</tr>
<tr>
<td>Code</td>
<td>One-Day Courses</td>
<td>Instructor(s)</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| E10-03 | Modern HPLC Method Development in Pharmaceutical Analysis | Dr. Michael W. Dong, Genentech  
Dr. Henrik T. Rasmussen, Johnson & Johnson |
| E10-05 | Chemometrics without Equations | Dr. Donald Dahlberg, Lebanon Valley College  
Dr. Barry M. Wise, Eigenvector Research |
| E10-06 | Enhanced Productivity by Design in the Analytical Laboratory: Design of Experiments for Analytical Chemists | Dr. Zenaida Otero Gephardt, Rowan University |
| E10-07 | Physical Characterization and Analytical Test of Pharmaceutical Solids | Dr. Steve R. Bym, Purdue University  
Dr. Xiaoming (Sean) Chen, OSI Pharmaceuticals |
| E10-08 | Effective Laboratory Audits and Inspections (NEW) | Mr. Ken Christie, VTS Consultants |
| E10-11 | Advanced Excel©: Write Your Own Functions and Macros | Dr. Robert de Levie, Bowdoin College |
| E10-14 | Modern HPLC for DMPK, Bioanalytical, and Analytical Development Scientists: Essentials, Best Practices, and Recent Developments | Dr. Michael W. Dong, Genentech  
Dr. Anne-Françoise Aubry, Bristol-Myers Squibb |
| E10-15 | Laboratory Data Analysis Using Excel©: New Uses for a Familiar Tool | Dr. Zenaida Otero Gephardt, Rowan University |
| E10-17 | The Chemistry of Drug Degradation | Dr. Karen Alsante, Pfizer  
Dr. Dinos Santafianos, Pfizer |
| E10-18 | Analytical Laboratory Techniques for Pharmaceutical Chemists (NEW) | Dr. Merlin K.L. Bicking, ACCTA, Inc. |
| E10-19 | Infrared Spectral Interpretation I | Dr. Brian C. Smith, Spectros Associates |
| E10-20 | Infrared Spectral Interpretation II | Dr. Brian C. Smith, Spectros Associates |
| E10-22 | The Role of Chromatography in the Analysis and Characterization of Protein Therapeutic Drugs | Mr. C. David Carr, Bioanalytical Technologies |
| E10-24 | Interpretation of Mass Spectra with Practical Solutions to Problems | Dr. Birendra Pramanik, Merck  
Dr. Mike Lee, Milestone Development |
<table>
<thead>
<tr>
<th>Code</th>
<th>~ One-Day Courses ~</th>
<th>Instructor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Tuesday</strong></td>
<td></td>
</tr>
<tr>
<td>E10-25</td>
<td>Data Analysis for Improved Productivity in the Analytical Laboratory</td>
<td>Dr. Zenaida Otero Gephardt, Rowan University</td>
</tr>
<tr>
<td>E10-26</td>
<td>Drug Development Process for Chemists (NEW)</td>
<td>Dr. Michael W. Dong, Genentech</td>
</tr>
<tr>
<td>E10-27</td>
<td>Introduction to Near-Infrared Spectroscopy: Applications in the Pharmaceutical Industry</td>
<td>Dr. Emil Ciurczak, Consultant</td>
</tr>
<tr>
<td>E10-28</td>
<td>Critical cGMP and ICH Guidelines for Analytical Laboratories (NEW)</td>
<td>Ms. Kim Huynh-Ba, Pharmalytik C.S. Dr. Linda Ng, US Food and Drug Administration</td>
</tr>
<tr>
<td>E10-29</td>
<td>Sample Preparation: The Chemistry Behind the Techniques</td>
<td>Dr. Merlin K.L. Bicking, ACCTA, Inc. Dr. Douglas E. Raynie, South Dakota State University</td>
</tr>
<tr>
<td>E10-30</td>
<td>How to Create a More Effective Lab Safety Program (NEW)</td>
<td>Ms. Christina L. Dillard, Laboratory Safety Institute</td>
</tr>
<tr>
<td></td>
<td><strong>Wednesday</strong></td>
<td></td>
</tr>
<tr>
<td>E10-35</td>
<td>Practical Headspace Gas Chromatography</td>
<td>Dr. Mary Ellen P. McNally, DuPont Dr. Thomas A. Brettell, Cedar Crest College</td>
</tr>
<tr>
<td>E10-36</td>
<td>Impurity and Degradant Identification: Strategies for Structure Elucidation via Chromatography, MS and NMR</td>
<td>Dr. Thomas R. Sharp, Pfizer Dr. Brian L. Marquez, Pfizer Mr. Todd C. Zelesky, Pfizer</td>
</tr>
<tr>
<td>E10-38</td>
<td>Leachables and Extractables in Pharmaceutical Development</td>
<td>Dr. Daniel L. Norwood, Boehringer Ingelheim Mr. James O. Mullis, Boehringer Ingelheim</td>
</tr>
<tr>
<td></td>
<td><strong>Thursday</strong></td>
<td></td>
</tr>
<tr>
<td>E10-41</td>
<td>Dissolution: A Rational Approach to Developing and Validating Methods for a Variety of Purposes</td>
<td>Mr. Gregory Martin, Complectors Consulting</td>
</tr>
<tr>
<td>E10-43</td>
<td>Practical Solutions to Characterization of Protein Therapeutics Using Mass Spectrometry (NEW)</td>
<td>Dr. Guodong Chen, Bristol-Myers Squibb Dr. Li Tao, Bristol-Myers Squibb Dr. Ragu Ramanathan, Bristol-Myers Squibb</td>
</tr>
<tr>
<td>E10-45</td>
<td>Practical Introduction to Raman Spectroscopy</td>
<td>Dr. Frederick H. Long, Spectroscopic Solutions</td>
</tr>
<tr>
<td>E10-46</td>
<td>Authoring High Quality Technical Reports</td>
<td>Mr. Gregory Cuppan, McCulley-Cuppan, LLC</td>
</tr>
<tr>
<td>E10-47</td>
<td>Theory and Practice of Ultra High-Pressure Liquid Chromatography (UHPLC)</td>
<td>Dr. Michael E. Swartz, Synomics Pharma</td>
</tr>
</tbody>
</table>
2010 EAS Seminars

Sponsored by
American Chemical Society – NJ Mass Spectrometry Discussion Group
Bristol-Myers Squibb
Delaware Valley SAS
North Jersey Chromatography Discussion Group
Procter & Gamble
SABIC Innovative Plastics

Eastern Analytical Symposium has refocused and expanded its Outreach program for undergraduates and high school teachers. Each seminar has outstanding presenters from academia and industry who will demonstrate the advantages of a career in chemistry.

Teaching Green Chemistry in High School
Sunday, November 14, Seminar E10-S01
*Free Registration Limited to Middle and High School Teachers*
1:00pm to 4:00pm, Parlor Room (DoubleTree Hotel)

This seminar will be offered exclusively to high school teachers. The seminar, organized by Alvin Bober, will be conducted by two scientists active in the field of Green Chemistry: Dr. Jennifer Young from Green Chemistry Institute of the American Chemical Society and Dr. Douglas Raynie from South Dakota State University.

What Does an Analytical Chemist Do in Industry
Monday, November 15, Seminar E10-S02
*Free Registration for Qualified Teachers and Students*
10:00am to 3:30pm, Parlor Room (DoubleTree Hotel)

This seminar, organized by Procter and Gamble, is designed to familiarize students with varied career opportunities for analytical chemists in industry. The seminar begins with a discussion of the education requirements and salaries that an analytical chemist may expect in industry. The different roles (including scientific consultant, methods developer, and problem solver) of the industrial analytical chemist are explained. Significant time is spent on problem solving, both the process and solving real-world problems. Students will learn a “framework” for approaching problems. Actual case studies solved at P&G are posed, providing students with a strategy for approaching and solving these problems. Time will be available to ask questions on these topics and other related subjects. The Course text includes supplementary material on finding a job, summer employment, etc. The entire course, especially the problem solving, is structured for extensive participation and interaction.

Analytical Chemistry and Forensic Science
Tuesday, November 16, Seminar E10-S03
*Free Registration for Qualified Teachers and Students*
10:00am to 3:30pm, Parlor Room (DoubleTree Hotel)

This seminar, organized by Dr. Richard Saferstein, will have several speakers and they will discuss a variety of analytical technologies that are applicable to solving forensic science problems. Students will be introduced to the science of forensic toxicology and will learn the strategies that forensic toxicologists employ to detect poisons and drugs in the human body. Significant achievements that have been made in utilizing DNA typing for the purposes of linking biological evidence to a single individual will also be discussed. A number of actual case discussions are presented and finally an overview of how forensic analysis makes use of minute particles in resolving crimes are given.

Evolution of Industrial Careers for Chemists:
Diversity, Technology Advancements and Job Security
Wednesday, November 17, Seminar E10-S04
*Free Registration for Qualified Teachers and Students*
10:00am to 3:30pm, Parlor Room (DoubleTree Hotel)

This seminar, organized by Dr. Sergio C. Nanita, DuPont Co., will provide attendees with a perspective on how careers have evolved overtime, with emphasis on the present and future direction of professional roles and analytical technology in industry. Speakers from chemical and instrumentation companies, as well as, the American Chemical Society (ACS) Department of Diversity Programs will participate in the event. The morning seminar is followed by a round-table discussion to allow attendees to interact/network with experienced industry professionals.
2010 EAS Workshop

Career Placement for Senior Scientists and Managers

Workshop E10-W01, Wednesday, November 17, 9:00 a.m. – 11:00 a.m.
Parlor Room 168 ~ DoubleTree Hotel
Facilitator: John Guarniere, President RCE Associates

This workshop is free to all Full Conferees, but pre-registration is required to reserve a space.

Finding key technical and management positions is more difficult than ever before. Those newly created positions supported by cash flow are no longer being created. So, if you are looking to manage and/or lead others, or to find a key scientific or engineering position, you need to develop and execute a superior career marketing plan. We will discuss some of the critical issues that senior scientists and engineers face in making career changes, such as:

- Establishing career objectives, recognizing strengths and weaknesses, and determining key accomplishments
- Planning a multi-dimensional search, identifying website position openings
- Developing outstanding resumes, cover letters, and telephone presentations
- Targeting future employers (Government, Industry, Education)
- Evaluating Management and Profit & Loss skills
- Networking contacts, Dealing with Executive Search Firms

If time permits, a discussion of proven technique allowing better communication of pertinent accomplishments to potential employers.

About the Instructor:
John Guarniere is the founder of RCE Associates. He is a Senior Human Resource Consultant who has worked for major corporations. He has provided both Retained Executive Search and Career Advisory Services over the years.

Everything is theoretically impossible, until it is done.

- Robert Heinlein

With almost three decades of experience, CONSCI specializes in non-routine gas analysis for electronics, specialty gas, semiconductor and petrochemical industries.

Consolidated Sciences
1416 E Southmore Ave
Pasadena, TX 77502
www.consci.com
800-240-3693
2010 EAS EMPLOYMENT BUREAU

Applicant Instructions

- When you arrive, please check-in at the symposium registration area for the exact location of the Employment Bureau.
- Advance registration for the 2010 EAS Employment Bureau is NOT permitted. DO NOT send any resume to EAS in advance of the symposium. You MUST bring your resume to the Employment Bureau Applicant Registration desk when you arrive at the symposium.
- The Employment Bureau will operate from 9:00 a.m. until 4:00 p.m. on Monday and Tuesday. On Wednesday, the hours will be 9:00 a.m. to 1:00 p.m. Job postings will be available for applicant review beginning at 11:00 a.m. on Monday morning. Interviews will not be scheduled until 12:00 noon on Monday. Job postings are continually updated during EAS and applicants are expected to visit the Job Posting bulletin boards on a regular basis.
- When you arrive at the Employment Bureau, check-in at the Applicant Registration desk. You will receive your Applicant identification number at this time. This number will be used for all communications with prospective employers as well as the Employment Bureau.
- You must supply the Employment Bureau with one (1) copy of your resume. Your resume should be no longer than TWO (2) pages in length. Your resume will be assigned an Applicant ID#.
- Postings of current job openings will be available for your review in the Job Posting Area. Access to these postings will be limited to applicants registered with the Employment Bureau.
- If you wish to contact an employer regarding a job posting, you may leave a note for that employer using the Employer ID# that appears on the posting. Notes should be placed in the appropriate envelope on the bulletin board labeled, "MESSAGES FOR EMPLOYERS" in the Employer Message area.
- Check for responses or other communications from prospective employers in the Applicant Message area. Messages will be labeled with your Applicant ID# and can be found on the bulletin board labeled, "MESSAGES FOR APPLICANTS."
- If you wish, you may purchase a copy of the 2010 EAS Employment Bureau Job Postings for $20. Please inquire at the Employment Bureau Registration desk. The Job Postings will be mailed after the close of EAS.

2010 EAS EMPLOYMENT BUREAU

Employer Instructions

- When you arrive, please check-in at the symposium registration area for the exact location of the Employment Bureau.
- On-site registration of employers is permitted for the EAS Employment Bureau. Please complete the Employer Registration and Job Opening forms which are available at the Employment Bureau.
- The Employment Bureau will operate from 9:00 a.m. until 4:00 p.m. on Monday and Tuesday. On Wednesday, the hours will be 9:00 a.m. to 1:00 pm. Job postings will be available for applicant review beginning at 11:00 a.m. on Monday morning. Interviews with prospective applicants cannot be scheduled until 12:00 noon on Monday. Employers wishing to conduct interviews with prospective applicants can schedule these at the Employment Bureau's Employer Registration desk.
- When you arrive at the Employment Bureau, check-in at the Employer Registration desk. You will receive your Employer identification number at this time. A number will be assigned for each job opening. These numbers will be used for all communications with prospective applicants, as well as with the Employment Bureau. Job postings may be submitted on your Company stationery or by filling out the EAS Job Opening form. If advance submission of Job openings is not possible, these may be submitted after you register with the Employment Bureau on site.
- Resumes of prospective applicants will be available for your review in the Resume Area. Access to resumes will be restricted to employers with job openings registered with the Employment Bureau.
- If you wish to contact an applicant regarding their qualifications, you may leave a note for that applicant using the Applicant ID# that appears on their resume. Notes should be placed in the appropriate area on the bulletin board labeled, “MESSAGES FOR APPLICANTS” in the Applicant Message area.
- Check for responses and other communications from prospective applicants in the Employer Message area. Messages will be labeled with the Employer ID# for the specific job opening desired. These messages can be found in the appropriate envelopes on the bulletin board labeled, “MESSAGES FOR EMPLOYERS.”
- If you wish, you may purchase a copy of the 2010 EAS Employment Resume book. The cost for the Resume book will be $200. Please inquire at the Employment Bureau Registration desk.
Advanced Chemistry Development, Inc., (ACD/Labs) 321
110 Yonge Street, 14th Floor
Toronto ON M5C 1T4 Canada
Phone: 416-368-3435 / Fax: 416-368-5596 / Website: www.acdlabs.com
Advanced Chemistry Development, Inc., (ACD/Labs) provides analytical scientists and managers with software for data handling and interpretation, chromatographic method development, impurity identification, material science studies, open-access laboratories, and more. Over the past decade, ACD/Labs has developed one of the most comprehensive integrated software for NMR, MS, HPLC, Raman, and IR on the market. Characterized by easy-to-use chemometric applications, processes, and managers, ACD/Labs' molecular spectroscopy software is actively used in both industrial and academic research facilities around the world.

Advanced Instruments Inc. 206
Two Technology Way
Norwood MA 02062
Phone: 781-320-9000 / Fax: 781-320-8181 / Website: www.aicompanies.com
Advanced Instruments, Inc. is the premier supplier of freezing point osmometers and related testing supplies. Our products are used extensively in pharmaceutical, biotechnology, clinical and contract research laboratories worldwide. We are committed to supplying you with superior products, new technologies and unsurpassed service.

Agilent Technologies, Inc. 502, 504
2850 Centerville Road
Wilmington DE 19808
Phone: 800-227-9770 / Fax: 302-633-8944 / Website: www.agilent.com/chem
Agilent provides solutions in genomics, proteomics, metabolomics, drug development, analytical chemistry, QA/QC, and is ranked #1 in regulatory compliance. Product portfolios include HPLC, LC/MS, HPLC-Chip/MS and prep-HPLC; GC and GC/MS; ICP, ICP-MS; UV-Vis, Fluorescence and FT-IR spectrometers; Dissolution and on-line UV-Vis Dissolution; Flash Chromatography; AFM and PCR, software solutions, LC/GC columns and SPE.

Air Liquide America Specialty Gases LLC 228
6141 Easton Road
P.O. Box 310
Plumsteadville PA 18949-0310
Phone: 800-217-2688 / Fax: 215-766-2476 / Website: www.alspecialtygases.com
Air Liquide America Specialty Gases LLC is the largest supplier of EPA protocol gases and specializes in pure and mixed gases for all types of scientific, medical, and industrial applications. Worldwide manufacturing facilities provide convenient delivery, while scottgas.com offers online ordering and innovative etcols that empower specialty gas users to significantly reduce operating costs as well as help ensure environmental regulatory compliance. More information is available by calling 800-217-2688, visiting www.alspecialtygases.com, or by emailing requests to solutions.center@airliquide.com.

Afgas East 727
490 Stetson Road
Piscataway NJ 08854
Phone: 732-752-4500 / Fax: 732-752-0791 / Website: www.airgas.com
Afgas is the one source for a complete line of ultra-high-purity analytical pure gases, precision-blended gas standards, laboratory chemicals, and cryogenic solutions along with the required gas/chemical handling equipment and safety products. As the supplier of Standard Reference Materials (SRMs) to the National Institute of Standards and Technology (NIST), you can count on Afgas to provide the most reliable and highest quality specialty gases and mixtures to support your analytical applications. And our new Safe-T-Cyl™ program eliminates the headaches and hassles of lecture bottle disposal. Products are delivered on our trucks where and when they’re needed worry-free. Technical, design, equipment expertise, and a national presence combine to meet your needs at a single research facility or at multiple manufacturing sites across the United States. Proven supply chain strategies improve your ability and speed to bring products to market, serve your internal customers, or help reduce your manufacturing total costs. Our track record of consistency and reliability make us the first choice in analytical, research and process operations. We have the right solutions whether you are a new start up, an existing group with a need to expand, or just looking to improve your enterprise’s bottom line. Please stop by our booth # 727, email jim.kenny@airgas.com, or call Jim Kenny 1-800-355-2123 x 3052 and find out how we can help you today with proven process and supply methodology to meet your specific objectives.

Alfa Aesar, a Johnson Matthey Company 428
26 Parkridge Rd.
Ward Hill MA 01835
Phone: 978-521-6300 / Fax: 978-521-6350 / Website: www.alfa.com
Alfa Aesar, a Johnson Matthey Company, is a leading international manufacturer and supplier of specialty and high purity chemicals in research to bulk quantities. With over 30,000 products, Alfa Aesar is the single source for customers' chemical needs, offering a full line of Spectruli® analytical standards, Spectroflour® alkali borate analytical fluxes and Platinum Labware. The catalog also includes a variety of organic and inorganic compounds, pure metals and alloys, precious metal catalysts and more.

American Chemical Society's New York Section 530
St. John's Univ., Chemistry Dept.
800 Utopia Parkway
Jamaica NY 11439
Phone: 516-883-7510 / Fax: 516-883-4003 / Website: www.newyorkacs.org
American Chemical Society's New York Section member relations. Everyone in Science is invited to stop by to learn more about the NYACS. Current members are encouraged to stop by to say hello and/or volunteer to join a committee. Applications will be available for science professionals interested in joining the American Chemical Society. NYACS Website: www.newyorkacs.org

American Laboratory 324
30 Controls Drive
Shelton CT 06484
Phone: 203-926-9300 / Fax: 203-926-9310 / Website: www.iscpubs.com
Our publications are edited for North American chemists and life scientists who have a professional interest in the application of modern instrumentation to analytical chemistry, bio-analysis and applied spectroscopy. The editorial includes application notes, technical articles, conference reviews and information on the most current laboratory instrumentation. Home Page www.iscpubs.com

American Pharmaceutical Review 517
9200 Keystone Crossing,
Suite 475
Indianapolis IN 46240
Phone: 317-816-8787 / Fax: 317-816-8788
Website: www.americanpharmaceuticalreview.com
American Pharmaceutical Review is the leading review of business and technology for the pharmaceutical industry throughout North America. Each issue offers our readers unbiased editorial on the following topics: drug delivery, information technology/compliance, research and development, analytical development and control, equipment and facility manufacturing and regulatory affairs. With its cross border perspective, American Pharmaceutical Review is able to keep its readership of technical personnel, scientists, and others fully abreast of the latest trends and developments in the process of pharmaceutical manufacturing. To read online, and for your *FREE subscription, please visit www.americanpharmaceuticalreview.com.

Analtac Inc. 524
75 Blue Hen Drive
Newark DE 19713
Phone: 800-441-7540 / Fax: 302-737-7115 / Website: www.analtac.com
Analtac is the only US manufacturer of TLC plates (over 500 formats) as well as a wide range of TLC accessories and equipment including: developing tanks, products for sample preparation and sample application, film and digital documentation systems, UV visualization equipment, and densitometric analysis software. Featured products are the new Color HPLC columns, SPE columns, and the recently introduced Derivapress along with the CycloGraph Centrifugal Chromatography System, and the TLC AutoSpotter. Latest catalogs will be available.

Anasys Instruments Corp. 107
121 Gray Avenue, Suite 100
Santa Barbara CA 93101
Phone: 805-730-3310 / Fax: 805-730-3300 / Website: www.anasysinstruments.com
Anasys Instruments is dedicated to delivering innovative products and solutions that measure material properties for samples with spatially varying physical and chemical properties at the micro and nanoscale. Anasys Instruments introduced the nanoTA in 2006 which pioneered the field of nanoscale thermal property characterization. Now, in 2010, Anasys Instruments proudly introduces the breakthrough nanoIR Platform which pioneers the field of nanoscale IR measurement.
Anton Paar USA 232, 234
10215 Timber Ridge Drive
Ashland VA 23005
Phone: 804-550-1051 / Fax: 804-550-1057 / Website: www.anton-paar.com
Anton Paar produces high-quality measuring and analysis instruments for industrial and research applications. In the fields of density and concentration measurement it is the established world leader. Its product portfolio also includes viscometers, rheometers, polarimeters and refractometers; and instruments for X-ray structure analysis, solid surface analysis, microprobe and microwave decomposition. Openness to the requirements of customers and attention to developments in markets are the basis for new product ideas. Anton Paar’s strong R&D department and its partnerships with external research institutes turn these ideas into instruments at the cutting edge of technology.

Applied Research and Photonics, Inc. 240
470 Friendship Road, Suite 10
Harrisburg PA 17111
Phone: 717-220-1003 / Fax: 717-566-1177 / Website: www.arphotonics.net
Terahertz spectrometer ARP is introducing TeraSpectra™, a novel terahertz spectrometer having applications in biological, biomedical, pharmaceutical, and other life science areas. This THz tool is absolutely awesome in that it is the least expensive and broadest THz range (0.1-30 THz) with high average power scanning on the market. It will oblate the legacy and other competitive THz tools that are limited to lower power and lower THz range. ARP technology genuinely represents the “state-of-the-art” in THz scanning and detection. TeraSpectra™ has already achieved the high sensitivity and broad coverage that ARP received the prestigious NASA TechBrief’s nano-50 award. TeraSpectra is a turn key spectrometer. It allows label-free characterization requiring very small amount of samples. TeraSpectra is highly sensitive, can resolve down to femto-mol or parts per trillion.

Aries Filterworks - Division of ResinTech, Inc. 337
1 ResinTech Plaza
160 Cooper Road
West Berlin NJ 08091
Phone: 856-768-9601 / Fax: 856-768-9601 / Website: www.arieswater.com
Manufactures deionization systems and water purification cartridges for the scientific community. Replacement cartridges fit most major brands of water systems. Added the new Gemini High Purity Water System, which incorporates “Multipass” UV and microprocessor controlled dispensing functions. Products are made in the USA using ResinTech’s premium resins, carbons and specialty medias.

ATAGO USA, Inc. 411
12011 NE First St.
Bldg. C, Ste. 110
Bellevue WA 98005
Phone: 425-637-2107 / Fax: 425-637-2110 / Website: www.atago.net
Since 1940, ATAGO has been an industry leader in refractometers and polarimeters. Our instruments are world renowned for their high quality, durability, and ease of use. We offer a full range of products, indispensable in quality control or research & development labs for quality checks, material ID, and monitoring reactions based on changes in refractive index. No matter how unique or obscure the application, ATAGO strives to manufacture the right instrument to exceed your needs. We look forward to the opportunity to earn your business!

Atlantic Analytical Laboratory, LLC 407
291 Route 22 East
Salem Industrial Park - Building 4
Whitehouse NJ 08888
Phone: 908-534-5600 / Fax: 908-534-2017 / Website: www.atlanticanalytical.com
The friendly and knowledgeable staff at Atlantic Analytical Laboratory has well over 150 years of combined expertise in Gas Chromatography (GC), Mass Spectrometry (MS), Gas Chromatography / Mass Spectrometry (GC/MS), and Fourier Transform Intra-Red spectroscopy (FTIR) for high purity gas analysis; low-level impurity determination in bulk cogenetic gases such as Liquid Nitrogen (LIN), Liquid Oxygen (LOX), and Liquid Argon (LAR); semiconductor and integrated circuit analysis using Residual Gas Analysis (RGA) Mil-Std-883 Test Method 1018 and outgassing/leak testing by Mass Analysis (RGA) Mil-Std-883 Test Method 1018 and outgassing/leak testing by Mass. Openness to the requirements of customers and attention to developments in markets are the basis for new product ideas. We look forward to the opportunity to earn your business!

Aurora SFC Systems 606
1755 East Bayshore Rd.
Suite 25B
Redwood City CA 94063
Phone: 877-879-7321 / Fax: 650-325-7637 / Website: www.aurorasfc.com
Aurora SFC Systems provides analytical chromatography instrumentation based on next-generation Supercritical Fluid Chromatography (SFC) technology. Aurora SFC Systems is driven by a dedicated team of SFC experts, who have contributed fundamental improvements in the technology of analytical and preparative SFC since the mid-eighties. Aurora SFC manufactures and distributes the SFC Fusion A5 - a module that converts a conventional HPLC into a reliable, fast and sensitive SFC instrument. Using compressed carbon dioxide to reduce organic solvent waste, modern SFC produces UHPLC like separations. SFC provides an orthogonal separation view for samples, allowing chemists to make more confident determinations - faster.

Axiom Analytical, Inc. 529
1451-A Edinger Ave.
Tustin CA 92780
Phone: 714-913-4718 / Fax: 949-757-9306 / Website: www.goaxiom.com
Axiom Analytical, Inc. offers a broad line of software and hardware products and services for all forms of industrial and laboratory vibrational spectroscopy - Near-IR, Mid-IR, UV-Visible, and Raman. Products include spectroscopic probes, flow cells, microprocessor controlled instrument software, and real-time analysis programs. With strong vertical integration capability, we provide custom product design, development, and manufacturing. With low cost, high performance lasers and spectrometers, we strive for versatility - innovating solutions. Our ISO9001 & ISO13485 certified facility and patented technologies ensure high quality products. As a result, B&W Tek, Inc. leads Raman Spectrometer sales worldwide.

B&W Tek, Inc. 611
19 Shea Way
Newark DE 19713
Phone: 302-368-7824 / Fax: 302-368-7830 / Website: www.bwtek.com
B&W Tek, Inc. is an advanced instrumentation company providing optical spectroscopic and laser instruments for biomedical, physical, chemical, and material science communities. With strong vertical integration capability, we provide custom product design, development, and manufacturing. With low cost, high performance lasers and spectrometers, we strive for versatility - innovating solutions. Our ISO9001 & ISO13485 certified facility and patented technologies ensure high quality products. As a result, B&W Tek, Inc. leads Raman Spectrometer sales worldwide.

Baseline Service 605
508 Lincoln Blvd.
Middletown, NJ 08846
Phone: 732-563-1200 / Fax: 732-563-1210 / Website: www.baselineservice.com
Baseline Service has been providing Multi-Vendor Laboratory Instrument Support for over 15 years. Our success is based on providing quality service by a staff of highly trained and experienced Instrument, Laboratory, and Compliance Personnel. Our customers have come to rely on our proven elevated level of professionalism and quality service. Baseline Service supplies these services at a substantial cost saving to our customers. Experience, reliability, and cost savings makes Baseline Service the choice of some of the largest Pharmaceutical, Consumer Healthcare, Chemical, and Academic companies and institutions in the Country.

BaySpec, Inc. 523
1101 McKay Drive
San Jose CA 95131
Phone: 408-512-5928 / Fax: 408-512-5929 / Website: www.bayspec.com
BaySpec, Inc., founded in 1999 with 100% manufacturing in the USA (San Jose, California), is a vertically integrated spectral sensing company. The company designs, manufactures and markets advanced spectral instruments, from UV-VIS spectrometers to handheld and portable NIR and Raman analyzers, for the biomedical, pharmaceutical, chemical, food, semiconductor, Homeland security, and the optical telecommunications industries.

Beckman Coulter, Inc. 239
250 S. Kraemer Blvd.
Brea CA 92822
Phone: 714-993-5321 / Fax: 714-993-5321 / Website: www.beckmancoulter.com
Beckman Coulter offers a variety of analyzers for the characterization of particles, including particle sizing and counting, laser diffraction, zeta potential and submicron analysis, and an applications laboratory equipped to support the full range of particle characterization. Industries include pharmaceutical, environmental, energy, food and beverage. www.coultercounter.com

Bel-Art Products/ Ricca Chemical Co. 237
6 Industrial Rd.
Pequannock NJ 07440
Phone: 973-694-0500 / Website: www.belart.com
Bel-Art Products features all your common lab needs like spinbars®, racks, wash bottles, and desiccators. It also offers many unique items for the lab such as teflon Buchner funnels, centrifuge tubes, and desiccators. www.riccachemical.com

Bayspec, Inc.
1101 McKay Drive
San Jose CA 95131
Phone: 408-512-5928 / Fax: 408-512-5929 / Website: www.bayspec.com
BaySpec, Inc., founded in 1999 with 100% manufacturing in the USA (San Jose, California), is a vertically integrated spectral sensing company. The company designs, manufactures and markets advanced spectral instruments, from UV-VIS spectrometers to handheld and portable NIR and Raman analyzers, for the biomedical, pharmaceutical, chemical, food, semiconductor, Homeland security, and the optical telecommunications industries.
user an economical advantage over time consuming and costly laboratory methods. Our products include innovative environmental contaminant in soil, water and oils; biocrating oil analysis and moisture in organic matrices. Visit our web site at: www.dexsil.com.

Digilab Inc.  
84 Holliston Hill Road  
Holliston MA 01746  
Phone: 717-222-3130  

Digilab provides innovative, value-added solutions for scientific research and discovery in Life Science, Analytical Chemistry, and Diagnostic markets. Digilab’s products and technologies include a wide range of sample preparation tools for DNA and protein introduction into HPLC and MS, sample handling systems such as Oligonucleotide synthesizers and cell line printers and sample detection systems such as raman spectrometers and high content imaging and analysis systems for a wide variety of applications.

Dionex Corporation  
224, 226  
1228 Titan Way  
P.O. Box 3603  
Sunnyvale CA 94088-3603  
Phone: 408-481-4275 / Fax: 408-730-9403 / Website: www.dionex.com  

Visit Dionex at booth 224 to see our latest innovations for productivity in capillary Ion Chromatography (IC) and UHPLC. The ICS-5000 Reagent-Free IC (RFC) system with Eluent Generation (EG) is the world’s first capillary IC system. Developed with flexibility, modularity, and ease-of-use in mind, the ICS-5000 combines the highest sensitivity with convenience. We have also enhanced our UltiMate® 3000 range of high performance liquid chromatography (HPLC) systems to deliver HPLC and UHPLC in a single system platform. The UltiMate systems enable laboratories of all sizes to experience the benefits of UHPLC which include faster analyses, reduced running costs and environmental impact, while resolving more analyses. Visit the Dionex Field Laboratory on Tuesday only in the Davis Room! Scheduled Demonstrations: 10:00: Ion Chromatography. Kirk Chassaniol will demonstrate a Dionex IC system running the new IonSwift™ Max-100 monolith column specifically developed for the simultaneous determination of inorganic anions and organic acids in a variety of matrices. Noon: UHPLC Lunch’n Learn Session. Matthew Neely will demonstrate the UltiMate® 3000 Rapid Separation LC (RSLC) system. He will analyze water- and fat-soluble vitamins in various enriched beverages using our x2 parallel technology. 2:00: Charged Aerosol Detectors. Kevin Courtemanche will present the Theory and Mechanics of Charged Aerosol Detectors and demonstrate many pertinent applications for the pharmaceutical industry. After the presentation, Kevin will demonstrate the latest version of the Chromelon® Chromatography Data System (CDS) software.

Distek, Inc  
508, 510  
121 North Center Drive  
North Brunswick NJ 08902  
Phone: 888-234-7835 / Fax: 732-422-7310 / Website: www.distekinc.com  

Distek presents the new ActiPix SD300 dissolution imaging system. The ActiPix SD300 provides a unique capability of quantitative imaging of the liquid/surface phenomena for a diverse range of substances including API’s, tablets, formulation, gels, liquids, stents and patches. Distek will also show our Evolution 6100 “bathless” and Evolution 6300 bath based Dissolution Systems with patented in vessel temperature measurement along with a variety of products for automation including; Evolution 4300 autosampler and Opt Dis In-situ UV Fiber Optics. Be sure to visit us at Booth #506, drop off your business card and be entered to win an 8GB Apple iPod touch.

Eksigent  
446  
5875 Arnold Road  
Dublin, CA 94560  
Phone: 925-560-2600 / Website: www.eksigent.com  

Eksigent is creating new possibilities for life science research and drug discovery & development with its innovative Microflow™ and NanoFlow™ fluid delivery systems. NanoLC systems for proteomics generate precise LC gradients at nanoliter-per-minute throughput, and sensitivity, Eksigent’s leading-edge LC systems are being used by prominent research, pharmaceutical, and biotechnology firms around the world.

ELGA LabWater, LLC  
329  
5 Earl Court  
Woodbridge IL 60517  
Phone: 630-343-5251 / Fax: 630-910-4798 / Website: www.elgalabwater.com  

ELGA LabWater specializes in delivering water purification systems for research, science, clinical and healthcare environments. Our pure and ultra pure water purification systems provide a few liters to several thousands of liters of water per day reliably and consistently so you can focus on your research. For over 50 years we have been the acknowledged specialists in water purification for laboratories worldwide.

EMD Chemicals Inc.  
233  
480 S. Demand Rd.  
Gibbstown NJ 08027  
Phone: 856-222-0342 / Fax: 856-423-4389 / Website: www.emdchemicals.com  

Merck KGaA is EMD Chemicals Inc. in North America. Our global headquarters are in Darmstadt, Germany and US headquarters are in Gibbstown, New Jersey. We have over 340 years of excellence in the development and manufacture of specialty chemicals for pharmaceutical, biotech, cosmetic, automotive, plastics, and various industrial applications. We were previously known as EM Science. Chromatography is a key area of expertise at EMD Chemicals. For over 100 years Merck KGaA has been a pioneer and innovator in the field. We are the worldwide leader in Thin-Layer Chromatography, our HPLC Columns have won awards and set new standards for Chromatographers, and we are the world’s largest producer of Chromatographic Silica.

Enwave Optronics  
435  
1820 W. McDurmott Street, Suite B  
Irving, CA 92614  
phone: 949-955-0258 / fax: 949-955-0259 / Website: www.enwaveopt.com  

ES Industries  
202, 204  
701 South Route 73  
West Berlin NJ 08091  
Phone: 856-753-8400 / Fax: 856-753-8484 / Website: www.esind.com  

ES Industries supplies the widest variety HPLC and SFC columns available. HPLC offerings include state of the art fluorinated, chiral, and super base deactivated/pH stable reverse phase columns. We have recently developed a line of sub 2 micron columns for reverse phase, HILIC and SFC applications. These columns have been specifically designed for use with ultra-high pressure HPLC systems. We offer a wide variety of SFC columns including pyridine, pyridyl amide, fluorinated, nitro and diethyl amino propyl (DEAP). Our chiral phases include both cellulose and amylose based chiral selectors.

EST Analytical  
418  
503 Commercial Dr.  
Fairfield OH 45014  
Phone: 800-283-3510 / Fax: 513-642-0106 / Website: www.estanalytical.com  

Since 1990, EST has supplied analytical laboratories throughout the U.S. with advanced analytical instrumentation solutions. EST has grown dramatically over the past several years by creating a culture of commitment to our customer’s success. Our innovative approaches to improving laboratory throughput and profitability within the environmental laboratory are the results of this commitment and have become standard in the industry. We appreciate your interest in our products and we hope to have an opportunity to serve you. It is our goal to provide you with the best product solution for your needs. We want to earn your business and keep you coming back for years to come.

Eurotek, Inc.  
722  
94 Buena Vista Ave.  
Rumson NJ 07760  
Phone: 732-224-0056 / Fax: 732-224-0087 / Website: www.eurotek.com  

Eurotek, Inc. is a distributor of standard scientific equipment and a consultant for specialized solutions to research centers in Central European countries and Russia since 1989. Since 2005 Eurotek, Inc identified several high technology companies in Russia and became involved in marketing and distribution of their products in Germany and USA. At EAS 2010 Eurotek is presenting MilliChrome A-02, the only HPLC Instrument in the world that offers a HPLC-UV database enabling to analyze medicine, drugs, explosives and other standard substances. by simple, fast, low cost, reliable and fully automated procedure. No calibration or reference material is needed. D-Bases contains over 500 substances and is easily expandable. Being highly portable and tested for accelerations of above 10G, MiliChrome A-02 is ideal for applications in mobile laboratories. Simple is use, with demonstrated learning period of under one week, it can be used in Labs that do not have highly skilled and HPLC experienced personnel. The

Evox  
105  
857 State Road  
Princeton NJ 08540  
Phone: 609-252-9192 / Fax: 609-252-9101 / Website: www.evox.com  

Evox, the premier manufacturer of electron microscopes and x-ray analyzers for nanotechnology. Evox provides powerful yet affordable tabletop and traditional scanning electron microscopes for both experienced and entry level electron microscopists. The Mini-SEM (tabletop scanning electron microscope) and the evoX VZ series (standard size electron microscopes) are practical and easy to use. Both electron microscopes platforms can be equipped with Evox’s award winning X-ray NanoAnalysis (EDX) system and high speed, light element liquid nitrogen free x-ray detectors for elemental identification and concentration. The NanoAnalysis software also includes, advanced imaging for particle counting, sizing and measurement. Also included is
EveX’s superior elemental mapping routines, which include Fast Map mapping at near video speed; 2D and 3D mapping; saving a spectro at every pixel of the image. Other advanced software features include EveXtSA (trace sensitive analysis) and Vide-oSEM; EveX’s full motion video.

Excelsior Corporation 603
20 Main Street
Acton MA 01720
Phone: 978-264-1980 / Fax: 978-264-1981 / Website: www.excelsior.com
Excelsior’s ion mobility spectrometry (IMS), standalone IMS & IMS-MS, enable organic reaction analysis in seconds providing an accurate reading on reaction progress. Consumption of starting materials and the formation of the product can be identified using sub-nanogram quantities in the reaction mixture. An electrospray ionization (ESI) source can introduce non-volatile species in gaseous so they are separated based on molecular mass and shape. In addition, pharmaceuticals can be rapidly identified for cleaning validation in pharmaceutical manufacturing.

Exel Laboratory Services 604
17 Overlook Ave.
Randolph NJ 07869
Phone: 973-479-7280 / Website: www.exel-labs.com
Exel Laboratory Services has world-wide capabilities in advanced surface analysis, materials characterization and R&T support. We have over 30 years experience in industrial problem solving, and utilize state-of-the-art analytical equipment. We go beyond just determining the root cause of failure of your product. Our scientists and engineers will work with you to develop corrective actions and provide permanent solutions.

Ezone Sciences Inc. 437
25 Riverside Drive
Pine Brook NJ 07058
Phone: 862-926-1950 / Fax: 862-926-1990 / Website: www.ezone.com
Ezone Sciences Inc. is a leading gymnastics company that provides state-of-the-art solutions for glycan analysis. Our proprietary GlycanMap® platform enables high-throughput, quantitative analysis of glycans in two major areas: 1) support of biologics development and manufacturing, and 2) a platform for discovery and development of biomarkers. Ezone’s experts apply state-of-the-art capabilities in mass spec, robotic assays, and bioinformatics to provide customized glycan analysis solutions that meet the needs of our clients and partners.

Fluid Imaging Technologies 433
65 Forest Falls Drive
Yarmouth ME 04096
Phone: 207-846-6100 / Fax: 207-846-6110 / Website: www.fluidimaging.com
Fluid Imaging Technologies manufactures FlowCAM®, a continuous-imaging particle analyzer that rapidly counts, images, and analyzes particles in a discrete sample or continuous flow, enabling researchers and technicians to identify and analyze particles, cells and organisms using over twenty image parameters. Classify particles like silicone oil droplets or protein aggregates in formulations using morphological pattern matching. FlowCAM is highly sensitive to translucent particles and low concentrations. Configurations are available for visible and sub-visible particle characterization.

Food Quality 624
Wiley-Blackwell
111 River Street
Hoboken NJ 07030
Phone: 877-762-2974 / Fax: 800-597-3299 / Website: www.foodquality.com
Food Quality, a Wiley Company, is the science-based journal of quality assurance, safety, and security in the food and beverage industry. It examines current products, technologies, and philosophies; tracks the development of tools that processors and the food industry use to ensure safe and consistent products; reviews regulatory and sanitation issues, including current good manufacturing practices (cGMPs), contamination control, and traceability; and provides industry news and career information. Food Quality serves as an industry catalyst that unifies professionals in venues where values of quality assurance, safety, and security are fostered.

FOSS NIRSystems, Inc. 201, 203
7703 Montpelier Road
Laurel MD 20723
Phone: 301-680-9600 / Fax: 301-236-0134 / Website: www.foss-nirsystems.com
FOSS NIRSystems, Inc. is a unit of FOSS A/S of Denmark and the world’s leading supplier of scanning near-infrared (NIR) products and services. We have more than 40 years of industry experience and more than 18,000 successful installations worldwide. Headquartered in Laurel, MD, FOSS NIRSystems designs and manufactures a complete line of NIR spectrophotometers and provides turnkey solutions from laboratory and process applications. Sales, service, and support offices are located worldwide to serve our customers in the best possible way. For more information about FOSS NIRSystems and our complete product line, please contact us. Phone: +1-301-680-9600 / Email: info@foss-nirsystems.com or visit our website at: http://www.foss-nirsystems.com

Full Spectrum Analytics, Inc. 422
85 Rickenbacker Circle
Livermore CA 94551
Phone: 925-795-6357 / Fax: 877-443-4085 / Website: www.fullspectrum-inc.com
Full Spectrum Analytics, Inc. is an independent service organization providing a wide range of service solutions for analytical chromatography and mass spectrometry laboratories. Prompt on-site service is delivered by Certified Field Service Representatives and Application Support Specialists from offices located in New Jersey, Pennsylvania, Texas, Utah, Arizona, Washington, and California. Founded in 1992, FSA is the premier independent service provider for major Government, Life Science, Forensic, Pharmaceutical, Industrial and Environmental laboratories. FSA supports instruments manufactured by Agilent, Waters, Varian, AB Sciex, Shimadzu and Dionex. We have the obstacles involved in using and system validation programs for HPLC, LCMS, GC, GCMS, TOC and ICP instruments. Full Spectrum Analytics provides seamless service for your Multi-Vendor chromatography systems. Please visit us at Booth #424 today. Thank you.

Gases & Instrumentation Magazine 325
77 Elmwood Road
Wellesley Hills MA 02481
Phone: 781-431-7186 / Fax: 781-431-2696 / Website: www.gasesmag.com
Gases & Instrumentation (G&I) Magazine is a source for the technology and application of industrial, specialty, and medical gases. G&I is designed for anyone involved with detection, analysis or delivery of gases. Markets covered include semiconductors, medical and pharmaceutical, chemical processing, electronics manufacturing, food and beverage, and homeland security. Subjects covered include gas management, generation, purity and filtration, HAZMAT, sensing/detecting/monitoring, gas analysis, vacuum technology, leak detection, packaging and regulatory issues. Free subscriptions available at www.gasesmag.com.

Genevac, an SP Scientific Brand 304
3538 Main Street
Stone Ridge NY 12484
Phone: 845-255-5000 / Website: www.spscientific.com/Genevac
Genevac has remained an industry leader by partnering with customers to understand the obstacles involved in using centrifugal evaporation/concentration systems. This partnership has led to the development of a range of products to meet your evaporation/concentration requirements. The Genevac equipment range - the Rocket, EZ-2, mVac and HT Series - contains breakthrough technology designed to make the equipment more robust and easier for operators to use. This technology provides better results, typically in a shorter amount of time. Accessories such as the SampleGenie, the Speed Trap, Cool Heat Technology and the Sample Guard are just a few of the items that make Genevac centrifugal evaporators the industry leaders. Genevac - Evaporation pure and simple.

GenTech Scientific, Inc. 306
23 Mill Street
Arcade NY 14090
Phone: 858-492-1068 / Fax: 858-492-0383 / Website: www.GenTechScientific.com
GenTech Scientific is a diversified analytical equipment company dedicated to providing quality new and refurbished instruments along with impeccable service to the scientific community around the world. GenTech specializes in sales and service of GC’s, HPLC’s and Mass Spectrometers along with AA, ICP and Spectrophotometers. GenTech offers instrument service on most major manufactures such as Agilent, Shimadzu, Perkin Elmer, Varian, and Thermo. All instrumentation is fully refurbished at our facility in Arcade, New York and comes with a full warranty and lifetime telephone support. GenTech stocks a very extensive parts and accessory inventory from those major instrument manufacturers. They offer on-site or in-house service, OQ/PQ, service contracts, PM, circuit board repair as well as comprehensive training courses. Training can be provided at our facility or at your site, and can be customized or for learning basic GC, HPLC and MS operation, Sample Prep, Calibration, Analysis, GC/ HPLC Theory and Method Familiarization.

GERSTEI, Inc. 506
701 Digital Drive
Suite 85
Linthicum MD 21090
Phone: 410-247-5885 / Fax: 410-247-5887 / Website: www.gerstelus.com
20+ Years of Chemical Analysis Solutions: GC/MS, LC/MS sample introduction and application. Full Spectrum Analytics provides ongoing support for your Multi-Vendor chromatography systems. Please visit us at Booth #424 today. Thank you.

Choice Technologies, Inc. 604
3535 Paradise Rd
Henderson NV 89015
Phone: 702-873-2800 / Fax: 877-762-2870 / Website: www.choice-tech.com
Choice Technologies, Inc. is an independent service organization providing a wide range of service solutions for analytical chromatography and mass spectrometry laboratories.

2010 EAS Final Program November 2010
Glas-Col, LLC
711 Huiman Street
Terre Haute IN 47802
Phone: 812-235-6167 / Fax: 812-234-6975 / Website: www.glascol.com
Glas-Col offers a line of hot plates, magnetic stirrers and hot plate magnetic stir-
ners. We excel with concentrators and evaporators for quick, efficient removal of
solvents, including our new FlexiVap Work Station. We still offer one of the larg-
est selections of heating mantles and custom heating jackets in the world plus a full
line of temperature controls and monitors. Glas-Col, LLC offers a range of safety acces-
sories such as Glovebags, safety shields, flow monitors and lead stability products.
Also check out our NEW micro centrifuge tube mixer a personal, compact, lightweight
mixer that replicates the quick, rhythmic motion of finger-vortexing to a multitude of
micro-tubes simultaneously.

Grace Davison Discovery Sciences
2051 Waukegan Road
Deerfield IL 60015
Phone: 847-948-8600 / Website: www.discoverysciences.com
Trust your chromatography results to Grace Davison Discovery Sciences, the premier
manufacturer of media for Flash, HPLC, Process chromatography, and more. We help
pharmaceutical labs in all stages of research optimize their time and improve their
results with our high quality HPLC, UHPLC and Prep LC columns, our award-winning
Reveleris Flash® Chromatography system with advanced detection capabilities, and
our full range of supporting accessories, standards, and other equipment.

Greenwood Products Inc.
253 Wagner Street
Middlesex NJ 08846
Phone: 732-469-7200 / Fax: 732-469-2055 / Website: www.greenwoodprod.com
Greenwood Products Inc. is a 15+ year old NJ based distributor of plastic and glass
bottles, jars, containers, closures, pre-cleaned & certified products, VOA vials, chroma-
tography vials and caps, misc laboratory supplies etc. Additional warehouse locations
are based in PAF/LAMA. Please check out our web site @ www.greenwoodprod.com

GTS-Welco, Inc., A Praxair Joint Venture
1 Steel Road East
Morrisville PA 19067
Phone: 215-736-5256 / Fax: 215-736-5240 / Website: www.gts-welco.com
GTS-Welco Inc., a Praxair Joint Venture, is the Mid-Atlantic area’s largest producer
and supplier of Specialty, Industrial, Medical, and Cryogenic Gases as well as Spe-
cialty Gas Equipment and Distribution Systems. GTS-Welco has over 40 sales, pro-
duction, and distribution facilities located in New Jersey, New York, Pennsylvania, on
the Delmarva Peninsula, and in West Virginia and Virginia. We work in unison with
Praxair’s National network of sales & distribution facilities in the U.S. and Canada,
to bring our products, services, new technology, and superior value to the scientific com-
nunity in the most economical and expeditious fashion. Visit us this year in Booth No.
622, sign up for our FREE Specialty Gases & Equipment Source Guide and choose
from our wide selection of product literature. Our technical support staff will be present
to assist with your every need. We’ll show you what’s new in packaged gases.

Hanna Instruments
3820 Packard Road
Suite 120
Ann Arbor MI 48108
Phone: 800-504-2662 / Fax: 734-971-8155 / Website: www.hannainst.com
Hanna Instruments, a world wide manufacturer of quality analytical instrumentation for
over 30 years. Our products are available in portable, bench top and in line configura-
tions. Hanna’s line of instrumentation measure a wide range of critical parameters
such as pH, Conductivity, Chlorine, ORP, COD, DO, Temp and much more. Come visit
us at Booth #323 and see our many new products introduced at Pittcon 2010.

HI Scientific Services Inc.
626 NW Front Street
Milford DE 19963-1033
Phone: 800-344-4752 / Fax: 610 640-2156 / Website: www.HI-Scientific.com
HPLC Repair Service, Performance Verification/Calibration, Validation. Since 1983, HI
Scientific Services has been providing professional cost-effective on-site service for
all manufacturer types of HPLC instrumentation. Full Service/Performance Verification
plans are available.

Hitachi High Technologies America, Inc.
5100 Franklin Drive
Pleasanton CA 94588
Phone: 800-548-9001 / Fax: 925-218-2900 / Website: www.hitachi-hta.com/LShome
Hitachi High Technologies America, Inc. assists researchers in finding solutions to
their scientific instrument requirements. We are committed to providing the highest-
quality, reliability-proven analytical instrumentation, including Ultra High-Speed Liquid
Chromatograph (U-HPLC), High Performance Liquid Chromatograph (HPLC), Amino
Acid Analyzers, UV-Visible/NIR and Fluorescence Spectrophotometers, and LCMS
systems. Hitachi’s LachromUltra is a flexible Ultra High-Speed Liquid Liquid Chromatograph,
delivering ultra-fast analysis, higher resolution, increased sensitivity and the flexibility
to run both conventional and ultra-high resolution LC analyses on a single system.
LaChromUltra is the practical new generation LC solution that meets your laboratory’s
needs and fits your budget.

Honeywell Burdick & Jackson
101 Columbia Road
Morristown NJ 07960
Phone: 973-455-2528 / Website: www.Burdj.com
Honeywell Burdick & Jackson (HB&J) is a leading manufacturer of high purity solvents,
having pioneered solvent purification technology 50-plus years ago. With a range of
solvent lines, including ACS/HPLC, GC2 and LC/MS, along with chromatography
products and innovative packaging, HB&J remains committed to developing the high-
est quality products.

Horizon Technology
45 Northwestern Ave.
Salem NH 03079
Phone: 603-893-3663 / Fax: 603-893-4994 / Website: www.horizontechinc.com
Horizon Technology Inc. - Leading the world in automated sample preparation for preci-
sion parallel evaporation, sample concentration and solid phase sample extraction.
The automated sample preparation systems we develop and manufacture reflect our
understanding of the challenges today’s laboratories face. Horizon Technology helps
laboratory managers meet their business objectives by increasing sample through-
put, reducing operating costs and improving the accuracy and consistency of their data.
The Applied Markets we serve are Environmental Monitoring, Industrial Chemi-
cal, Food and Beverage, Pharmaceutical, Biopharmaceutical, Homeland Security, and
Petrochemical. www.horizontechinc.com

HunterLab
11491 Sunset Hills Road
Reston VA 20190-5280
Phone: 703-471-6870 / Fax: 703-471-4237 / Website: www.hunterlab.com
HunterLab is the world’s most trusted leader in color measurement technology and
solutions. With almost 60 years of experience, we utilize state-of-the-art technology
to ensure our systems are suitable for “real world applications.” These systems are used
extensively in pharmaceutical applications to measure API and excipient color, EP and
USP color of solutions as well as capsule and tablet color. They also measure a wide
variety of food products from ingredients to baked goods.

IBDS
2 Occam Court
Surrey Research Park
Guildford GU2 7QB United Kingdom
Phone: 01483595000 / Fax: 01483595001 / Website: www.ibds.com
IBDS is a unique global supplier of innovative data management and analytics solu-
tions, which increase efficiency, reduce costs and improve business and scientific
productivity of R&D organizations worldwide. Organizations such as Pfizer, GSK, Cel-
era, MedImmune, Dana Farber and Roche employ IBDS solutions as an integral part
of their strategy to address the increasing pressures placed upon them by the need
for the secure, compliant capture, integration and analysis of complex research data.
IBDS is clearly differentiated from other software providers by its unique combina-
tion of deep domain knowledge and its ability to rapidly provide integrated business
process and robust data analytics solutions along the entire R&D value chain. IBDS
solutions secure organizations, valuable R&D data assets and enable rapid decision-
making through effective integration and analysis. They also support the protection of
intellectual property (IP) and the requirements for data quality defined under Good
Laboratory Practice (GLP) and Good Manufacturing Practice (GMP) standards. www.
ibds.com

Inorganic Ventures
300 Technology Drive
Christiansburg, VA 24073
Phone: 800-869-8799 / Fax: 540-585-3012 / Website: www.inorganicventures.com
We specialize in manufacturing custom inorganic standards, plus a wide selection of
catalog items designed for ICP, ICP-MS, AA, and IC. We’re one of the few manufacturer
registered to ISO Guide 34, ISO/IEC 17025, and ISO 9001. All standards include a
Certificate of Analysis detailing NIST traceability, certified values, and trace impurities.
Over 95% of custom solutions ship in three business days or less. Catalog items ship
same-day.

Intertek
7201 Hamilton Blvd
Allentown PA 18195
Phone: 888-400-0084 / Website: www.intertek.com/analytical-laboratories
Intertek scientists provide clients with advanced analytical tools and expertise for ma-
terials analysis and R&D. The laboratories support a wide range of industries and

November 2010
2010 EAS Final Program
48
markets including pharmaceutical, biotechnology, electronics, construction materials, industrial gases and more. Interfield scientists have years of industry experience, supporting client research, development and production projects.

Isotec 318, 320, 322
3858 Benner Road
Miamiburg OH 45342
Phone: 800-325-3010 / Fax: 800-240-4666 / Website: sigma-aldrich.com/Isotec

Isotec is a leading producer of stable isotope labeled compounds and isotope separation of Carbon-13 and Oxygen-18. Products include Deuterium, Carbon, Nitrogen and Oxygen labeled compounds, NMR Solvents, Reference Standards, Noble Gases and Gas Mixes. Isotec is the industry leader in custom synthesis capabilities. For the latest product and technical information, visit our web site, http://sigma-aldrich.com.

Jade Scientific, Inc. 526
39103 Warren Road
Westland MI 48185
Phone: 734-405-6620 / Fax: 734-405-6623 / Website: www.jadesci.com

Jade Scientific, Inc. offers over 100,000 laboratory products, including equipment, and chemicals with optional sizes from our own name brand products to a comprehensive list of major manufacturers that enable scientific discovery, clinical laboratory testing services, production and manufacturing. One stop shop for all your laboratory requirements. Currently, Jade Scientific services industrial, government, manufacturing, life science, education, electronics, clinical, hospital and pharmaceutical markets as the leading distributor of scientific products. We source products from all over the world in order to continually enhance our portfolio, and to pass along to our customers the benefits of our global purchasing leverage. We also stay abreast of all industry trends in order to ensure that the most innovative products are made available to our scientific clients. Our goal is to continue delivering high-quality products in our current markets. To accomplish this, we will adhere to the established product roadmaps for our existing solutions while simultaneously exploring opportunities to provide you with additional value in new areas. Come visit JADE SCIENTIFIC at Booth # 526

JEOL USA, Inc. 311
11 Dearborn Road
Peabody MA 01960
Phone: 978-535-5900 / Fax: 978-536-2264 / Website: www.jeolusa.com

JEOL is a global leader of NMR, GC/MS, LC/MS and electronic optical instrumentation used for scientific research and industrial applications. JEOL provides innovative technologies and products (such as our AccuTOF-DART mass spectrometer which allows analysis in open air with no solvent or sample preparation required). We will have information on this revolutionary product along with information on our compact automated ECS 400 MHz NMR (footprint reduced to half of a conventional system).

Joulé Scientific Staffing Solutions 729
1235 Route 1 South
Edison NJ 08837
Phone: 800-382-0382 / Fax: 732-494-6790 / Website: www.joulescientific.com

A pioneer in scientific staffing, Joulé Scientific Staffing Solutions is committed to exceeding their clients' expectations. Recognized for providing superior service, Joulé Scientific has provided specialized staffing to scientific, pharmaceutical, biotechnology, chemical and food, flavor and fragrance organizations for more than 20 years. Speak with us today about our customized solutions for your talent challenges.

Kaiser Optical Systems, Inc. 711
371 Parkland Plaza
Ann Arbor MI 48103
Phone: 734-685-8083 / Fax: 734-685-8199 / Website: www.kosi.com

Kaiser Optical Systems, a Rockwell Collins Company, is recognized as a world leader in the design and production of Raman analyzers and components for spectroscopy. Our RamanRxn Systems™ suite of Raman analyzer includes the ATEX certified RamanRxn3™ process analyzer for classified installations, the RamanRxn2™ multi-channel analyzer, and the RamanRxn2™ Hybrid analyzer for large and small area solids & liquids. Quantitative Raman, the RamanRxn4™ gas-phase process analyzer, and the Raman WorkStation™ featuring Kaiser’s revolutionary fast, quantitative PhAT technology. The Raman WorkStation™, delivers industry-leading sampling flexibility includes transmission Raman, both traditional microscopic and large-area modes of spectral acquisition plus the visualization, screening, and imaging capabilities of a Raman microscope. Raman analyzer installation locations include R&D, Pilot plant, manufacturing, and QA/QC. Pharmaceutical PAT applications include reaction monitoring, API production, polymorphic form quantitation, drug product unit operations including blending, granulation, and drying, and end product testing. Other Applications areas for RamanRxn Systems analyzers include biotech, semiconductors, nanotechnology, petrochemical, olefins, hydrocarbons, gas-phase, polymers, and specialty chemical. We invite you to visit our booth, learn about our products and discuss your applications needs.

Kinesis Inc. 334
P.O. Box 2230
Malta NY 12020-8230
Phone: 866-934-6353 / Fax: 518-289-5818 / Website: www.kinesis-usa.com

Kinesis Inc. is the source for OEM Equivalent Detector Lamps, Chromatography Consumable replacement Spares. Additionally, Kinesis Inc. is the Exclusive Distributor of KNAUER PLATINblue UHPLC instruments. Our KX VaporSafe Safe Solvent products for HPLC and other instruments minimize or eliminate VOC outgassing from reagent bottles and waste containers, improving environmental health and safety conditions in the lab.

Kitco Metals Inc. 235
620 Cathcart #900
Montreal PQ H3B 1M1 Canada
Phone: 866-834-0179 / Fax: 514-908-1386 / Website: platinum.kitco.com

International renowned for precious metals since 1977, Kitco Metals, supplies a full spectrum of platinum crucibles, dishes, electrodes. Our line of crucibles features the XHR platinum ware necessitated by all the major fusion machines. Kitco Metals also supplies sputtering targets, crucibles for crystal growth, components for glass manufacturing, etc. Our refining terms to credit the used metals are among the most competitive in the industry. Visit our website with access to the metal market prices and charts http://platinum.kitco.com

Lab Manager / LabX 505
478 Bay Street
P.O. Box 216
Midland ON L4R 1K3 Canada
Phone: 705-528-6888 / Fax: 705-528-0270 / Website: www.labx.com

There is no better media venue in print or online to reach decision makers in research organizations than with the Integrated Marketing Solution from LabX and Lab Manager. Lab Manager Magazine® is your source for information on management, technology, and equipment issues common to lab professionals in all sectors. LabX is a highly specialized marketplace where scientific equipment and supplies are bought and sold. Stop by the booth for your FREE Subscription to Lab Manager Magazine.

Lab Support 220
300 Hadley Road
3rd Floor
South Plainfield NJ 07080
Phone: 866-408-8625 / Fax: 908-822-1555 / Website: www.labsupport.com

As a recognized leader in scientific staffing, Lab Support, a division of On Assignment, provides contract, contract-to-hire and direct hire placement services. Operating with an extensive network of branch offices in the United States, Canada, Ireland, United Kingdom, the Netherlands, and Belgium, we actively connect clients with candidates in industries that include biotechnology, pharmaceuticals, food and beverage, medical devices, personal care, chemical, nutraceutical, material sciences, consumer products, environmental, petrochemical, and contract manufacturing.

Laboratory Equipment 612
100 Enterprise Drive
Suite 600, Box 912
Rockaway NJ 07866
Phone: 973-920-7000 / Website: www.laboratoryequipment.com

Laboratory Equipment, an Advantage Business Media property, provides laboratory managers, researchers and other scientific professionals news of the latest developments in equipment, systems, software, consumables and services in industries that include biotechnology, pharmaceuticals, food and beverage, medical devices, personal care, chemical, nutraceutical, material sciences, consumer products, environmental, petrochemical, and contract manufacturing.

LAUDA-Brinkmann, LP 302
1619 Underwood Boulevard
Delran NJ 08075
Phone: 856-764-7300 / Fax: 856-764-7307 / Website: www.lauda-brinkmann.com

LAUDA-Brinkmann, located in Delran, NJ, is the largest of LAUDA’s six global subsidiaries. Headquartered in Lauda-Königshofen, Germany, LAUDA is the leading manufacturer of constant temperature equipment and systems, and highly precise measuring instruments, used in a broad range of research, development and production capacities. Founded in 1956, LAUDA has more than 50 years of experience developing premium temperature control equipment and analytical measuring devices including water baths, low and high temperature circulators, chillers, industrial heating and cooling systems and process viscosity instruments. Our products provide precise temperature control from -100°C to 400°C with up to 20kW of cooling capacity.

LCGC North America 412
485F US Highway 1S
Ste. 100
Iselin NJ 08830
Phone: 732-596-0276 / Fax: 732-225-0211 / Website: www.ChromatographyOnline.com

LCGC, with a circulation of 51,198, is the largest dedicated publication in North America serving the chromatography market. With commitment to editorial excellence, LCGC provides critical editorial coverage of essential technology that will have a positive impact on laboratory research and development activities. Chromatography Techniques, a supplement to Laboratory Equipment, delivers information on products, applications and technologies in chromatography with a quarterly print product, web site and enewsletter. Free subscriptions are available at our booth.

LabX Tour

Stop by the booth for your FREE Subscription to Lab Manager Magazine.

Lab Tour

Stop by the booth for your FREE Subscription to Lab Manager Magazine.

Stop by the booth for your FREE Subscription to Lab Manager Magazine.
LEAP Technologies
P.O. Box 969
Carrboro NC 27510
Phone: 800-229-6814 / Fax: 919-929-8956 / Website: www.leaptec.com
Provides front-end automation for all areas of chromatography and mass spectrometry. LC/MS sample handling on-line, off-line, at-line for analytical processes of molecules in extracted liquids, solids, human, animal and plant tissues. Small worksta-
tion customization with over 50 accessories; fraction collectors; and Chromos Software to
double throughput for headspace, spme, ITEX-2.

LECO Corporation
3000 Lakeview Ave.
St. Joseph MI 49085
Phone: 269-985-5496 / Fax: 269-982-8977 / Website: www.leco.com
For almost 75 years, industries around the world have trusted LECO Corporation to
deliver technologically advanced products and solutions for organic and inorganic ana-
lysis. Today’s technologies for separation science resolve complex samples and
pioneer high sample throughput using GCxGC, GCxGC-TOFMS, and GC-TOFMS. A
unique combination of easy-to-use software and advanced instrumentation provide
an innovative solution for today’s most demanding applications, including food, flavor/
fragrance, petroleum, environmental, and metabolomics.

Life Science Connect
5340 Frying Road, Suite 300
Erie, PA 16510
Phone: 814-897-7700

MAC-MOD Analytical, Inc.
103 Commons Court
Chadds Ford PA 19317
Phone: 800-441-7508 / Fax: 610-358-5993 / Website: www.mac-mod.com
For over 24 years, MAC-MOD Analytical has been the exclusive US distributor of some of the
most unique and highest performance HPLC columns available. ACE Ultra-
Inert, Base deactivated columns from Advanced Chromatography Technologies have
come a standard in the pharmaceutical industry. From Bischoff Chromatography, we
offer ProntoSIL and POPC, or “Phase Opmixed Liquid Chromatography”. For
ultra-fast, high efficiency separations from HPPLC and HPLC equipment, we offer
HALO UHPLC Columns from Advanced Materials Technology. The unique “Fused-
Core” technology used in the manufacturing of HALO produces highly stable columns
capable of ultra-fast separations at moderate back pressures. In addition, we offer a
complete selection of tubing and fittings for HPLC, including ColumnSaver Pre-column
filters and SureFit connectors. For UHPLC applications, we have UltraShield high per-
formance pre-column filters.

MACHEREY-NAGEL Inc.
2850 Emrick Blvd.
Bethlehem PA 18020
Phone: 888-321-6224 / Fax: 484-821-1272 / Website: www.mn-net.com
MACHEREY-NAGEL Inc., a leading manufacturer of analytical products, introduces
new ground breaking chromatography products for Sample Preparation, HPLC, GC,
and purification. MACHEREY-NAGEL is the professional concept of innovation - the professional
concept of innovation - the professional concept of innovation.

Mestrelab Research S.L.
1575 Tanglewood Ln, F121
Escondido, CA 92029
Phone: 858-736-4563 / Website: www.mestrelab.com
Mestrelab Research develops MestReNova (Mnova) software for efficient processing,
analysis, predicting, reporting and managing NMR and LC/MS data on desktop computers (Windows, Mac or Linux). Mnova NMR, MS and NMR-Predict Desktop plu-
gins are widely used in pharmaceutical and chemistry research labs and educational
institutions. Mnova DB is a database and Chromatogram Taxing System for your analytical
data. Mnova ASV allows you to do automatic structure verification using H-1, HSQC and/or
or LC/CGMS data.

MicroSolv Technology Corporation
1 Industrial Way West
Bldg. E
Eatonown NJ 07724
Phone: 732-578-1777 / Fax: 732-578-9777 / Website: www.mscusa.com
Autosampler vials that use a new glass that does not have silanols or adsorb basic
compounds. Reduced Surface Activity glass vials and caps can eliminate quantitation
errors, spurious & missing peaks and other problems associated with glass. Excellent
choice for LC/MS. Also, HPLC Columns, Chromatographic, Wide Pore HPLC Columns,
Metabolomics Columns, and many advances in Separation Sciences including the
Cogent Diamond-Hydride HPLC Columns provide improved and different selectivity
and are easy to use.

Microtest Laboratories Inc.
104 Gold Street
Agawam MA 01001
Phone: 413-786-1680 / Fax: 413-789-4334 / Website: www.microtestlabs.com
Microtest Laboratories Inc. is a leader in Pharmaceutical Contract Manufacturing as
well as Microbiological, Analytical, Viral and Cleanroom Testing services. The company
serves the pharmaceutical, medical device and biotechnology industries. The company’s testing
facilities are ISO 9001 and ISO 17025 certified, as well as FDA regulated, meeting all GLP/GMP standards.

Metrohm USA
655 Pelican Creek Circle
Riverview FL 33578
Phone: 800-727-6768 / Fax: 813-316-4900 / Website: www.metrohmusa.com
See why Metrohm USA is the market leader and go-to source for your analytical chem-
istry lab equipment. Featuring a complete line of swiss-made titrators and titration
automation, ion chromatography systems, pH/meters, colorimeters, electrodes, voltammetric analyzers, oxide stability instrumentation and more. All carry 3 year
warranties, and our IC MSM suppressor features an unprecedented 10-yr warranty!
But we don’t stop there: we back our products with expert application support and services, we’re there when you need us. Don’t just take our word for it, stop by and talk with us!

Mettler-Toledo, Inc.
Tech Tour 701, 703
1900 Polaris Parkway
Columbus OH 43240
Phone: 614-438-4511 / Website: www.mt.com
METTLER TOLEDO is a leading global manufacturer of precision instruments. The
Company is the world’s largest manufacturer and marketer of weighing instruments for
use in industrial, food retailing and pharmaceutical uses. Mettler Toledo also
holds top-three market positions in several related analytical instruments markets and is a
leading provider of automated chemistry systems used in drug and chemical com-
pound discovery and development. Additional information about METTLER TOLEDO can be found at www.mt.com/lab.

Mieles
9 Independence Way
Princeton NJ 08540
Phone: 800-991-9380 / Fax: 609-419-4241 / Website: www.labwashers.com
Miele is the world renowned leader in critical cleaning applications and a leading man-

Md Scientific Glass Corp.
7844 Beechcroft Ave.
Gaithersburg MD 20832
Phone: 301-740-7509 / Fax: 301-740-3166 / Website: www.mdscientificglass.com
Md Scientific Glass Corporation manufactures and repairs high quality glassware for the scientific, pharmaceutical, governmental, chemical, industrial, environmental, chromatography and laser industries as well as educational laboratories. Md Scientific Glass Corporation master glassblowers combine for over 60 years of experience fabricating and manipulating borosilicate and quartz into standard catalog items and sophisticated custom components. Md Scientific Glass Supply to all types of custom-
ers, small, large or direct distributors. Repairing a broken or damaged item could save up to 70-75% of the cost to replace with a new item. In many cases we offer a pick-up and delivery service for repairs on glassware. No matter your choice of manufactured borosilicate glass and quartz material, Md Scientific Glass Corporation can transform it into a completely unique custom design or a slight variation of any stock item.
Milestone Inc. 229
25 Controls Drive
Shelton CT 06484
Phone: 866-995-5100 / Website: www.milestonesci.com
Milestone Inc., a global leader in the field of microwave chemistry, offers a complete suite of productivity tools for today’s modern chemists looking to perform microwave sample preparation. Our technology allows chemists to obtain the highest throughput for metals digestions, accelerated organic extractions, and direct matrix analysis. Visit us at booth 229 for the continued unveiling of our new UltraWAVE as it revolutionizes microwave digestion through the use of our patented Single Reaction Chamber technology (SRC) - run mixed batches and enjoy hassle free cleaning with disposable vials. Milestone will also be showing the latest in direct matrix analysis, on-demand acid purification, Ultra-trace cleaning for ICP/ICP-MS tools.

Millipore Corporation 208
290 Concord Road
Billerica MA 01821
Phone: 978-645-5476 / Fax: 877-627-7991 / Website: www.millipore.com
EMD Millipore, the Life Science division of Merck KGaA, offers innovative water purification systems for successful research and development of biotechnology and pharmaceutical therapies.

Minutubes 608
One Great Neck Rd.
Great Neck NY 11021
Phone: 516-439-5177 / Fax: 516-439-5175 / Website: www.minutubes.com
Minutubes offers precision metal tubing and fabricated tubular components for sampling and chromatography related applications. Over 100 alloys are available, in diameters from 0.10 to 30 mm. Our 20 years experience in diagnostic and sample preparation problem solving is available to meet your technical and cost challenges. As a leading manufacturer of tubing we bring solutions, including the smoothest ID finish, even inside the smallest probe and various tip geometries to resolve many diagnostic issues.

Modular SFC 619
842 Upper Union St.
Franklin MA 02038
Phone: 508-520-4000 / Fax: 508-520-4094 / Website: www.modularsfc.com
The Centrifan PE personal evaporator combines the features of a centrifuge and a blow-down evaporator. It requires no vacuum pump, no blow-down gas supply, and no maintenance. It is ideal for medicinal and synthetic chemists evaporating small quantities of reaction mixtures and for those drying purified fractions from HPLC and Flash LC. The inexpensive instrument provides a safe, reliable, simple, portable, and green alternative to other evaporators which may not recover the solvent they evaporate.

Nacalai USA, Inc. 231
6640 Lusk Blvd. Suite A200
San Diego CA 92121
Phone: 858-404-0403 / Fax: 858-404-0408 / Website: www.nacalaiusa.com
Nacalai USA provides COSMOSIL brand HPLC columns. The COSMOSIL chromatography product line includes several robust reversed phase and HILIC columns as well as specialty columns such as the Cholestel (cholesteryl group), pinAP (naphtylethyl group) PYE (pyrenylethyl group) and Sugar-D. COSMOSIL Buckyprep (pyrenylpropyl group) and PBB (pentabromobenzyl group) columns are well recognized worldwide for Fullerene separation.

New Era Enterprises, Inc. 205
P.O. Box 747
Vineland NJ 08362-0747
Phone: 800-821-4667 / Fax: 856-697-8727 / Website: www.newera-spectro.com
NMR sample tubes from micro to large diameter MRI coils, screw thread, tip-off, pressure valve and non-glass sample cells; capillary systems for very limited sample; RDC sample preparation and measurement supplies and accessories; EPR/ESR quartz sample tubes, Infrared optics-windows, lenses, ATR elements and optical coatings; Liquid, solid, gas transmission accessories; Internal, specular and diffuse reflectance accessories; HATR crystal plate mount and liquid transmission cell reconditioning, Ultraviolete, Visible, Fluorescence supplies and accessories. AA and ICP sampling supplies and accessories.

New York Microscopical Society 715
1 Prospect Village Plaza
Clifton NJ 07013
Phone: 973-470-8733 / Website: www.nyms.org
The New York Microscopical Society is a not-for-profit organization dedicated to the promotion of theoretical and applied microscopy and the promotion of interest and education in all phases of microscopy.

North Jersey Section - American Chemical Society 716
4 Cameron Road
Piscataway, NJ 08854
Phone: 732-463-7277 / Website: www.njacs.org
The North Jersey Section of the America Chemical Society is one of the largest Sections. The Section is involved in numerous activities in the community, academia, and industry. The NJ-ACS supports activities of various Topical Groups where students and professionals have the opportunity to discuss advances in their fields along with expanding their professional networks. Visit us at the Symposium or take a look at our website www.njacs.org to learn more about the Section.

O.I. Analytical 416
151 Graham Road
College Station TX 77845
Phone: 979-690-1711 / Fax: 979-690-0440 / Website: www.oico.com
O.I. Analytical provides instrumentation solutions for environmental, petrochemical, pharmaceutical, food and beverage, and homeland security applications. Instrumentation offered includes; selective GC detectors, custom configured GC/GC-MS systems, Purge-and-Trap sample concentrators and Thermal Desorbers for VOC analysis, Laboratory and On-line TOC analyzers, ITOC-CRDS isotopic carbon analyzers, Discrete and PIA/SFA automated chemistry analyzers, CNSolution cyanide analyzers, Ion-Cam 2020 transportable GC-MS systems, and GPS sample clean-up systems.

Oxford Instruments America 238
300 Baker Avenue
Suite # 150
Concord MA 01742
Phone: 978-369-9933 / Fax: 978-369-8287 / Website: www.oxford-instruments.com
Oxford Instruments will be displaying the MRC range of Benchtop NMR instruments for fast, easy, solvent-free measurement of oil, fat and moisture. The MRC is used for determining the oil and fat content of foods including snacks; chocolate and general foodstuffs, and for measuring oil in animal feed and oilsides. It is also used to measure spin finish coatings on fibers, and for various petrochemical and polymer applications. Research versions are used for diffusion, porous media, and hydration studies. Visit us at booth 238 to discuss your application.

Parker Balston - Analytical Gas Systems 309
242 Neck Road
P.O. Box 8223
Haverhill MA 01835
Phone: 800-343-4048 / Fax: 978-556-7652 / Website: www.labgasgenerators.com
We manufacture gas generators to eliminate high purity gas cylinders from the laboratory. There is no longer need to buy and store cylinder reserves and use laboratory space as protection from late deliveries, transportation interruptions, or periods of tight supply. With gas generators, you control supply. These state-of-the-art gas generators can continuously generate ultra-high purity gases for LC/MS/MS, GC, FT-IR, TOC, ICP, Thermal and AA instrumentation. All products are backed by fully staffed field sales and service organizations and one-year warranty.

Peak Scientific Inc. 431
19 Sterling Road
Billerica MA 01862
Phone: 866-647-1649 / Fax: 978-608-9903 / Website: www.peakscientific.com
Manufacturers of laboratory gas generators including nitrogen (both Membrane Technology & Carbon Molecular Sieve systems), hydrogen & zero air suitable to operate most laboratory analytical applications such as LCMS (liquid chromatography mass spectroscopy) & GC (gas chromatography). With varying flow rates, purities & pressures, generators are available with or without internal air compressors, and provide a safe & economical alternative to combustible bottled gas & cylinders offer a consistent purity resulting in accurate analysis.

PerkinElmer 707, 709
940 Winter St.
Waltham MA 02451
Phone: 800-762-4000 / Website: www.perkinelmer.com
At PerkinElmer, we are taking action to improve the health and safety of people and their environment. PerkinElmer conceives and delivers scientific solutions, software and services to meet our society’s ever-changing needs. We are committed to transforming risk into safety, mystery into knowledge and ideas into action for a healthier today and a better tomorrow. The need and demand for air and water quality monitoring and remediation continues to rise. Food safety and quality and a growing global population are critical issues that require solutions that deliver accuracy, precision, and rapid turnaround speeds. The measurement of volatile, semi-volatile and metal contaminants in petrochemicals is important in laboratory, quality control and process monitoring. Instrument configurations meeting the needs of ASTM and other special-
Pharmaceutical Formulation & Quality (PFQ) 624
Wiley-Blackwell
111 River Street
Hoboken NJ 07030
Phone: 877-762-2974 / Fax: 800-597-3299 / Website: www.pharmaquality.com
Pharmaceutical Formulation & Quality (PFQ), a Wiley Company, focuses on the formulation, development, validation, delivery, information technology, and QA/QC of pharmaceutical and biopharmaceutical products and services. A Wiley-Blackwell publication, PFQ has effectively served the informational needs of R&D, formulation scientists, quality managers, IT professionals and senior managers. The editorial content meets the needs of readers who primarily work in a laboratory in the post-discovery through pre-full-scale production environment. From patent application up to FDA approval, PFQ readers are actively involved in sourcing products and services, including excipients and APIs; particle measuring and microbial detection solutions; lab equipment and environmental monitoring hardware; information technology; quality assurance/quality control solutions; validation offerings and outsourcing solutions; and more.

Phenomenex 621
Tech Tour
411 Madrid Avenue
Torrance CA 90050-1430
Phone: 310-212-0555 / Fax: 310-328-7768 / Website: www.phenomenex.com
Phenomenex is a global technology leader committed to developing novel separation, purification and analytical chemistry solutions for the life sciences and related industries. Phenomenex’s core technologies include products for liquid chromatography, gas chromatography, sample preparation, bulk purification chromatographic media, and chromatography accessories and equipment.

pION INC 415
Tech Tour
5 Constitution Way
Woburn MA 01801
Phone: 781-935-8939 / Fax: 781-935-8938 / Website: www.pion-inc.com
pION INC offers ADME-related products and contract services, instruments, supplies, reagents and software. In addition we conduct expert/solutilizing vehicle screenings, Caco-2 analysis, BCS screening, solubility/permeability with µSOLV/PAMPA Evolution™ platforms. In situ fiber optic UV-based dissolution systems: µDSS ProfilerPLUS™ for API-sparing (up to 10,000 fold) preformulation/delivery research & RainboxPLUS detection system for time-savings in R&D/QC solid dosage forms testing.

Pittcon 2011 601
Suite 332
300 Penn Center Boulevard
Pittsburgh PA 15235
Phone: 800-825-3221 / Fax: 412-825-3224 / Website: www.pittcon.org
Pittcon 2011 will be held from March 13-18, 2011 at the Georgia World Congress Center in Atlanta, Georgia, USA. Pittcon is the world’s most comprehensive annual conference and exposition for laboratory science with more than 2,000 technical sessions including Symposia, Contributed and Invited sessions, Oral Presentations, Award Symposia, Workshops, and Poster sessions. The Exposition, a one-stop shop for all your laboratory instrumentation, supplies and services, will offer nearly 1,000 exhibitors from more than 90 countries. See all the latest advances in instrumentation and technology, www.pittcon.org.

Polymer Standards Service-USA, Inc. 616
Suite 3
43 Jefferson Blvd.
Warwick RI 02888
Phone: 401-780-8884 / Fax: 401-780-8824 / Website: pssgpcshop.com
PSS focuses on the science, development and teaching of Size Exclusion Chromatography (SEC) a.k.a. Gel Permeation Chromatography (GPC), to measure the molar mass, property distributions and structure of polymers, co-polymers and bio-polymers. PSS manufactures molecular weight polymers, (incl. custom synthesis), separation columns, and WinGPC Unity software. PSS’ contract testing lab offers multiple detection techniques, method & applications development. PSS supplies turn-key instrumentation (SECurity GPC System) and various detectors.

PPD 425
929 North Front Street
Wilmington NC 28401
Phone: 910-558-7196 / Website: www.ppd.com
PPD is a leading global contract research organization, celebrating 25 years of providing drug discovery, development and lifecycle management services. Our clients and partners include pharmaceutical, biotechnology, medical device, academic and government organizations. With offices in 42 countries and more than 10,500 professionals worldwide, PPD applies innovative technologies, therapeutic expertise and a commitment to quality to help our clients and partners maximize returns on their R&D investments and accelerate the delivery of safe and effective therapeutics to patients. Our state-of-the-art cGMP laboratories in Madison, Wis., Wayne, Pa., and Athlone, Ireland, provide a comprehensive range of chemistry manufacturing and controls laboratory services for all phases of drug development. We provide analytical testing services in method development and validation and stability and quality control testing, with particular emphasis on inhalation and biopharmaceutical products. Our established biopharm and inhalation analytical teams strictly adhere to good manufacturing practices. Through our scientific expertise and innovative approaches, we align with clients to collaborate and solve complex problems to ensure success. To learn more about our cGMP services, contact Nick Maraveyas, executive director, business development, at +1 910 815 3479 or at Nick.Maraveyas@ppdi.com. Or, visit www.ppd.com.

Proton Energy Systems Inc. 327
10 Technology Dr.
Wallingford CT 06492
Phone: 203-678-2000 / Website: http://www.protonenergy.com/
HOGEN® GC Hydrogen Generators utilize electricity and de-ionized water to produce a continuous stream of pressurized scientific grade (99.999%) hydrogen gas and automatically maintains a user-selected downstream pressure. With hydrogen production capabilities in the range of 300 cc/min to 20 lpm available, the HOGEN GC is suitable for use in analytical laboratories and light industrial environments.

Quality Lab Accessories LLC 726
36 Forest Ave.
Bridgewater NJ 08807
Phone: 908-685-7500 / Fax: 908-526-4151 / Website: www.qla-llc.com
QLA is celebrating over 13 years of providing pharmaceutical companies with an extensive range of accessories and consumables for all dissolution needs. Our product line includes glass vessels, vessel covers, baskets and capsule sinks. Also paddles, basket shafts, sampling cannula, cannula filters and calibration tools. All products are made in the USA and are designed to meet or exceed USP and OEM specifications. QLA offers the highest quality accessories at cost effective prices. We will be introducing our new Lab Services Division and also our innovative UltraCenter System for EAS 2010.

Quant Technologies 335
1463 94th Lane NE
Blaine MN 55449
Phone: 763-398-0508 / Fax: 763-398-0408 / Website: www.QuantTechnologies.com
Searching for the right HPLC detection solution? Quant Technologies offers the NOAQ systems for HPLC, UHPLC, SFC, Gradient Methods, Fractionation, and detection of compounds that are non-chromophoric. The NOAQ line of high performance particle counting detectors have unparalleled linearity, stability, sensitivity and precision. We are innovative designers and manufacturers of cutting edge, high quality, affordable detectors for your HPLC applications.

Quantum Analytics 512
363 Vintage Park Drive
Foster City CA 94404
Phone: 800-992-4199 / Fax: 650-312-0313 / Website: www.LQA.com
Rent, lease or purchase from our multi-million dollar inventory of new and reconditioned instruments-ready for immediate delivery. Instruments available include: GC, GC/MS, HPLC, LC/MS, Pyrolysis Systems, Thermal Desorption Systems, IFR, AED, Direct Inlet Probe, Micropettling System, Gas Generators, Sample Preparation and Handling, Data Systems and Software, ICP/MS, UV/Vis, TOC and XRF: manufacturers include: Agilent Technologies, ASAP, Frontier Laboratories, GeSiM, JAS, LEAP Technologies, Marquis International, Matheson Tri-Gas, Pickering Laboratories, Teledyne Tekmar and more.

R/S Tech-Prob Solutions, LLC 708
208 North US Hwy One
Unit 10
Tequesta FL 33349
Phone: 561-575-2229 / Fax: 561-575-2229 / Website: rstechsoln@gmail.com
R/S Tech-Prob Solutions LLC: is a contract research service organization. Our expertise is to provide chiral chromatographic methods to the pharmaceutical and biotechnology companies for the early development compounds. Our mission is to provide expert and cost effective analytical services to the discovery and chemical development scientists by providing chiral methods for the synthesis of chiral drug molecules. The services include enantiomeric and diastereomeric HPLC methods development for the asymmetric synthesis, enantiomeric purity methods development, purification and isolations of the stereo-isomers. In addition we also provide in-house training, seminars and consulting. To view our full service spectrum please visit us at www.chiralanalytics.com and contact us if you have any questions.

Polymer Standards Service-USA, Inc.
Real-Time Analyzers, Inc.  
382 Industrial Park Road #8  
Middletown CT 06457  
Phone: 860-635-9800 / Fax: 860-635-9804 / Website: www.rta.biz

Real-Time Analyzers, Inc. designs, manufactures, and sells rugged, high-performance Raman analyzers for field, process, and laboratory use. We also manufacture and sell award-winning substrates for SERS (Surface Enhanced Raman Spectroscopy). Our Portable Raman Analyzer is designed for field operation (lightweight, compact, battery operated, rugged). Our Industrial Raman Analyzer platform is for process and laboratory measurements. Each provides the highest fluorescence avoidance and x-axis stability. This means confident spectral subtractions, library searches, chemometrics, and quantitation without requiring recalibration.

Renishaw Inc.  
5277 Trillium Blvd.  
Hoffman Estates IL 60192  
Phone: 847-286-9953 / Fax: 847-286-9974 / Website: www.renishaw.com

Get chemical/molecular information from your SEM using the power of Raman spectroscopy. Renishaw Raman Microscopes provide chemical information confocally at sub-micron spatial resolution with auto-alignment, internal calibration & performance validation. Renishaw Raman spectrometers are configurable to include multiple excitation sources from the UV through NIR with automated laser switching and alignment, quick-launch fiber-optic probe, AFM/NSOM/Raman, SEM-Raman, PL, hot/cold cells, macro-sampling, global Raman imaging, near excitation analysis, 2D/3D mapping and depth-profiling.

Restek Corporation  
110 Benner Circle  
Bellefonte PA 16823  
Phone: 800-356-1688 / Fax: 814-353-1309 / Website: www.restek.com

Restek develops and manufactures innovative columns, tools, accessories, instrument parts, and reagent chemicals for gas chromatography, HPLC, and air sampling. A discrete team, Restek Performance Coatings, develops proprietary high-performance surface coatings that confer inertness to metals or glass, and/or are a barrier to hostile (acidic) environments. Our products are used in clinical and biomedical applications, environmental monitoring, quality assurance of foods and personal grooming products, forensics, petroleum/petrochemicals production, pharmaceutical research and production, and other areas.

Retsch Inc.  
74 Walker Lane  
Newtown PA 18940  
Phone: 866-473-8724 / Fax: 267-757-0358 / Website: http://www.retsch-us.com

RETSSCH is a world leader in the fields of sample preparation and the characterization of solids by providing the finest in milling, sieving and associated sample preparation equipment. RETSSCH instruments are essential tools for preparing samples for laboratory analysis. They stand for reliability, precision and durability. These three criteria, in addition to over 90 years' experience, have made us the market leader as a manufacturer of instruments and supplier of solutions to support our valued customers.

Rigaku Americas Corp.  
9009 New Trails Dr.  
The Woodlands TX 77381  
Phone: 281-362-2300 / Fax: 281-364-3628 / Website: www.rigaku.com

Rigaku provides the world's most complete line of X-ray diffraction and X-ray fluorescence instruments and components, including benchtop XRD and XRF systems, X-ray optics and detectors, the Saturn and SCDmini(TM) CCD-based single crystal diffractometers for small molecule crystallography, the Ultima IV and SmartLab® multi-purpose diffractometers with SAXS and in-plane capabilities, and the ZSX Primus series of high-powered WDXRF spectrometers with mapping capabilities, in either tube-above or tube-below configurations.

Robertson Microlit Laboratories, Inc.  
1705 US Highway 46  
Suite 1D  
Ledgeview NJ 07852  
Phone: 973-966-6668 / Fax: 973-966-0136 / Website: www.robertson-microlit.com

Robertson Microlit Laboratories is a full-service microanalytical laboratory providing analytical support services to the pharmaceutical, bio-technological, and chemical business communities. Utilizing research tools, research foundations, and government agencies have benefited from our personalized, collaborative working relationships and our competitive pricing. Quality, accuracy, and reliability are integrated into all our services, including our 24-hour turnaround service. Our comprehensive service portfolio includes expertise in: Elemental CHN analysis, Atomic Emission-Absorption Spectroscopy, ICP-OES, ICP-MS, DSC, TGA, melting point, FTIR, UV/VIS, Polarimetry, Ion Chromatography, Titrimetry, KF Aquametry, Log P, Log D and pKa measurements. Rest assured that whatever the project, our commitment remains the same. Our customized approach makes sure our customer's needs are always met in a timely manner. Please contact Robertson Microlit for all of your analytical needs - the choice of many Fortune 500 companies.

RoMack, Inc.  
P.O. Box 615  
Lightfoot VA 23090  
Phone: 757-258-4805 / Fax: 757-258-4694 / Website: www.romackfiberoptics.com

RoMack, Inc., manufactures fiberoptics assemblies, components and related products specifically tailored for spectroscopic, laser, plasma and medical applications. Products include probes, fiberoptics, connectors, adapters, patchcords, bundles, arrays, imagers, collimators, couplers, tapers and filter packages. RoMack, Inc routinely takes concept to product, creating solutions to the most difficult problems.

RPS, Inc.  
520 Virginia Drive  
Fort Washington PA 19034  
Phone: 215-540-0700 / Fax: 215-540-0770 / Website: www.rpsweb.com

RPS, The Next Generation CRO, provides comprehensive global Phase I-IV clinical trial solutions to the pharmaceutical and device industry. By combining an experienced clinical research operations infrastructure with the industry's largest resourcing engines, RPS is uniquely positioned to offer our Clients a broad spectrum of outsourcing solutions. These solutions range from globally integrated functional and cross-functional programs to enhanced global full service solutions, and are powered by highly experienced and seasoned project teams providing innovative, seamless, cost-effective and high quality services.

RTS Life Science  
95 Robb Way  
Fall River MA 02720  
Phone: 508-673-9524 / Website: www.rtslifescience.com

RTS Life Science is a major supplier of automated solutions for pharmaceutical and biotech companies worldwide. We provide innovative automated instruments for pharmaceutical testing including several new products: RTS Release-, an automated spectroscopy based solid dose testing system, RTS PrepStation-, an automated sample preparation system, and RTS LabEye-, a laboratory monitoring system. RTS serves worldwide customer needs in the US from its Massachusetts Headquarters and in Europe from its Manchester UK, Headquarters.

Rudolph Research Analytical  
55 Newburgh Road  
Hackettstown NJ 07840  
Phone: 973-584-1558 / Fax: 973-584-5440 / Website: www.rudolphresearch.com

Polarimeters, Refractometers, Density Meters/Specific Gravity Meters: Sample Handling Automation available for all instrumentation. Automatic Polarimeter line includes 12 different models with features including 21 CFR Part 11 compliance, multiple wavelengths, electronic cooling and heating, Automatic Refractometer line includes 6 different models with electronic cooling and heating, wide Refractive Index range (1.3 - 1.7 RI), Automatic Density Meters/Specific Gravity Meters with many innovative features designed to meet the most demanding applications. Models to satisfy needs of the pharmaceutical, sugar food, flavor and fragrance, chemical, beverage, and petrochemical industries, as well as education and research.

Scientific Plastics, Inc.  
1016 Southwest Blvd.  
Kansas City KS 66103  
Phone: 913-432-0322 / Fax: 913-432-0459 / Website: www.scientificplastics.com

Acid waste handling products. Sinks, cup sinks, neutralization and dilution tanks and spill containment trays.

Sepax Technologies, Inc.  
5-100 Innovation Way  
Newark DE 19711  
Phone: 302-366-1101 / Fax: 302-366-1151 / Website: www.sepax-tech.com

Sephax Technologies, Inc., Newark, DE headquartered HPLC column manufacturer, offers unique range of analytical and process scale bioseparation products including 3um, 5um, and 10um silica based Zenix™ and SRT® SEC (Size Excusion Chromatography); 1.7, 3, 5, and 10 µm non-porous polystyrene/divinyl benzene (PS/DVB) polymer based Antibody™ WCX and Proteomix® IEC. These products are especially developed for high resolution high efficiency analytical and process separation of MAb, Protein, Oligo, Carbohydrates, and various biologics. Sepax also manufactures SFC, HILIC, UHPLC and RP columns that aimed at solving customer’s small molecule separation challenges today.

SGE Analytical Science  
2007 Kramer Lane  
Suite 100  
Austin TX 78758  
Phone: 800-945-6154 / Fax: 512-836-9159 / Website: www.sge.com

The Specialty Gas Report 225
25 Helen Street
Warren NJ 07059
Phone: 908-753-8644 / Fax: 908-753-8111 / Website: www.specgasreport.com

The Specialty Gas Report is a quarterly magazine dedicated to the producers, distributors, users and manufacturers of Specialty and Medical Gases. Topics are crucial to all aspects of specialty and medical gas production, analysis, distribution and compliance with various government regulations. It is necessary reading for anyone producing, selling, and using specialty and medical gases.

Thermo Scientific 401-406, 408
5225 Verona Rd.
Madison WI 53711
Phone: 800-642-6538 / Website: www.thermoscientific.com/eah

Exciting new products will be on display at the Thermo Scientific booth. Thermo Scientific represents a broad range of high-end analytical instruments, chemistry and consumable supplies, laboratory equipment, software and services that enable integrated laboratory workflow solutions. See our solutions using techniques such as FTIR, UV-Vis, Raman, NIR, ICP, GC/MS, LC/MS as well as chromatography columns and consumables. These are integrated with informatics solutions such as LIMS and equipment, consumables, chemicals and reagents sold by our Fisher Scientific brand. Thermo Scientific is part of Thermo Fisher Scientific.

Thermo Scientific, formerly AhURA Scientific 602
46 Jonsip Road
Wilmington MA 01887
Phone: 978-657-5555 / Fax: 978-657-5921 / Website: www.thermoscientific.com/ahura

AhURA Scientific, now sold under the Thermo Scientific brand, is dedicated to bringing lab-accurate analysis directly to the point of need. The company’s field-deployed analytical instruments consistently deliver precise and actionable intelligence to human health and public safety specialists. The company’s products include TruScan for raw material verification and counterfeit drug identification; FirstDefender (Raman) and TruDefender FT (FTIR) for identification of unknown solid and liquid chemicals; TruDefender FTG for headspace gas analysis; and TruScreen for commercial aviation security.

Waters Corporation 624
111 River Street
Hoboken NJ 07030
Phone: 877-762-2974 / Fax: 800-597-3299 / Website: www.waters.com/waters/eventInstance.htm?eid=10133698

Waters Corporation: No other company can offer a more comprehensive range of system solutions, products and services like Waters. Liquid Chromatography. Mass Spectrometry. Informatics. Columns and Chromistries. Services and Support. From sample preparation, throughput, efficiency, sensitivity and quantitation issues, to uptime, compliance, maintenance and support concerns. Whatever your laboratory’s needs, Waters provides complete confidence in the technologies you need, when you need them.

Wyatt-Blackwell 419, 421
34 Maple Street
Milford MA 01757-3696
Phone: 508-478-2000 / Fax: 508-872-1990
Website: www.waters.com/waters/eventInstance.htm?eid=10133698

Wyatt-Blackwell is the international scientific, technical, medical and scholarly publishing business of John Wiley & Sons, with strengths in every major academic and professional field and partnerships with many of the world’s leading societies. For more information, please visit www.wileyblackwell.com or http://www.interscience.wiley.com.

Wilmad-LabGlass 221
1172 NW Blvd.
Vineland NJ 08360
Phone: 856-691-3200 / Fax: 856-691-6206 / Website: www.wilmad-labglass.com

Wilmad-LabGlass has been supplying the scientific community for over 70 years. Wilmad is world known for its NMR tubes and widely recognized as the leading manufacturer of NMR tubes in the world. LabGlass products are used in industrial, educational and pharmaceutical companies throughout the United States. Four locations nationally manufacture and repair scientific laboratory glassware to your needs.

Woodbridge Scientific, LLC 429
PO Box 4072
Woodbridge CT 06515
Phone: 203-387-5750 / Website: www.woodbridgescientific.com

Woodbridge Scientific, LLC, is the exclusive US distributor for PION INC’s Rainbow PLUS(tm) fiber optic dissolution monitor system. We also function as the northeast US manufacturer’s representative for VORTEX PHARMA GROUP (dissolution supplies and calibration services), PION INC (permeability, solubility, pKa and small volume dissolution services and instrumentation) and PharmaTest GmbH (dissolution testers, physical testing instrumentation and pilot-scale production equipment).

Wyatt Technology Corporation 423
6300 Holister Ave.
Santa Barbara CA 93117
Phone: 805-681-9009 / Fax: 805-681-0123 / Website: www.wyatt.com

DAWN family of multi-angle light scattering (MALS) instruments for absolute macro-molecular characterization determine absolute molecular weights and sizes of proteins, polymers, nanoparticles, DynaPro dynamic light scattering (DLS) instruments include cuvette based DynaPro NanoStar and the DynaPro Plate Reader for automat-
ed DLS measurements in standard well plate format for optimizing protein solutions for crystallography, general oligomerization characterization, or sizing nanoparticles. Eclipse Field Flow Fractionation (FFF) system combined with MALS separates and counts submicron particles and studies protein aggregates. Finally, the world-class Möbius mobility instrument (zeta-potential) for measurements of small molecules and proteins.

YMC America, Inc.

941 Marcon Blvd.,
Suite 201
Allentown PA 18109
Phone: 610-266-8650 / Fax: 610-266-8652 / Website: www.ymcamerica.com

YMC America is the leading provider of YMC brand HPLC columns and packings in the Americas. New products from YMC include Triart C18, an organic-inorganic hybrid reverse phase HPLC column. Other popular products include YMC UltraHT series HPLC columns for ultra-fast HPLC, ACTUS prep columns for high throughput/high durability prep HPLC, and YMC-BioPro porous and non-porous ion exchange columns for analytical and semiprep chromatography. Please stop by and see us in Booth 507.

ZirChrom Separations, Inc.

222
617 Pierce Street
Anoka MN 55303
Phone: 763-421-5264 / Fax: 763-421-2319 / Website: www.zirchrom.com

ZirChrom offers zirconia- and titania-based products for chromatographic method development. We provide a wide variety of column chemistries for reversed-phase (including LC-MS), ion exchange, normal phase and chiral chromatography. We also offer sub 2 micron products. ZirChrom HPLC columns are renowned for their unique selectivity, exacting reproducibility, high efficiency and ultra-stability. These columns may be used at both ambient and elevated temperature (to enhance LC-MS sensitivity and to reduce analysis time). Specialty products are available for in-line protein removal, phosphorylated peptide isolation and monoclonal antibody purification.

Highlights in the Exposition Area

FREE Light Lunch for all Conferees and Exhibitors:
Monday, Tuesday and Wednesday, 11:30 to 1:00
Have lunch or a snack and see the latest offerings from our exhibitors.

FREE Beverages for all:
Monday, Tuesday, and Wednesday, at 10:30 and 2:30
$50.00 Visa Gift Cards Raffled off at each
of the beverage breaks, except Monday AM. Open to all; must be present to win.

Take a Technology Tour!
The Technology Tour in the Exposition Hall is back again for 2010 and is bigger and better!
This EAS Final Program contains a special flyer to the Technology Tour (green insert). If you visit eight or more of the participating exhibitors and get the card marked, you can redeem the card for an additional gift at the EAS Souvenir Booth — your choice from a selection of EAS logo-ed items.

Here are the exhibitors participating in the Technology Tour:

Millipore
Thermo Scientific, formerly Ahura Scientific
Claissé
Shimadzu
Hitachi High Technologies America, Inc.
SGE Analytical Science
Distek, Inc.
YMC America, Inc.
Phenomenex
Metrohm USA
Atlantic Analytical Laboratory
Sepax Technologies
pION
Horizon Technology Inc.
ACD/Lab
Kaiser Optical Systems
Robertson Microlit Laboratories
Joule, Inc.
EMD Chemicals Inc.
Thermo Scientific
Special Events in the 2010 EAS Exposition Area

The following special exhibitor events will occur during the 2010 Eastern Analytical Symposium. Attendance at these events is limited to 2010 EAS registrants. For additional information, please contact the relevant exhibiting company.

Monday, November 15, 2010

**PerkinElmer**
McDivitt Room – Garden State Exhibit Center Lobby
9AM to Noon

Please join PerkinElmer on Monday, November 15 at the Eastern Analytical Symposium and Exposition for an educational seminar event. PerkinElmer product specialists will be presenting 40-45 minute talks focusing on FT-IR, ICP-MS, and LC/MS.

Registration/Info: Please contact Tracy Tran at tracy.tran@perkinelmer.com or 408-232-0658 and note which session(s) you will be attending.

Be sure to visit us at Booths # 707 and 709.

“Basic Principles of FT-IR Microscopy”
Presenter: Thomas P. Byron
Sr. Product Specialist, PerkinElmer
McDivitt Room – Garden State Exhibit Center Lobby
9AM to 10AM

This lecture will cover the basic theory and use of FT-IR Microscopes. Learn about Cassergain objectives, the need and use of apertures, spatial resolution, and how diffraction limits effect your measurement. Information on detector type (DTGS or MCT), will be discussed and their relative performance will be explored.

“NexION 300 ICP-MS”
Presenter: Lorraine Foglio and Leon Davidowski
Inorganic Product Specialists, PerkinElmer
McDivitt Room – Garden State Exhibit Center Lobby
10AM to 11AM

A discussion and review of testing for traces of inorganic impurities in pharmaceuticals to comply with the new USP Standards. Comparison of some elemental techniques with emphasis on ICP-MS.

“Introduction and Applications for Single Quadrupole LC/MS”
Presenter: Ron Snelling
LC Product Specialist, PerkinElmer
McDivitt Room – Garden State Exhibit Center Lobby
11AM to 12PM

Practical tutorial on the theory and practice of ultra high performance LC with focal emphasis on the power and utility of single quadrupole MS as a LC detector.

**Agilent Technologies**
Davis Room – Garden State Exhibit Center Lobby
Noon to 2:00 P.M.

Defining the New Age of HPLC – Coupling Innovative Column Technology to Optimized LC Systems for the Best Performance

Presenter:
Bob Giuffre
Applications Scientist, Agilent Technologies
Special Events in the 2010 EAS Exposition Area
(Continued)

In recent years, technological advances have really changed the way in which HPLC is performed in various laboratories. UHPLC technology surfaced with the utilization of smaller particle sizes in order to achieve better resolution in less separation time. Shortly thereafter, challenges in implementation led to improved design of HPLC instrumentation with consideration given to such parameters as data acquisition rates, delay volumes and dispersion. Most recently, another development in particle technology has altered traditional UHPLC from using sub-2 micron particles to superficially porous particles in order to achieve UHPLC results. This seminar will thus focus on the recent developments in LC analyses and discuss how to achieve optimal analysis by coupling the latest column technology with instrument innovations.

Retsch and Claisse
Retsch Inc. (Booth 217) and Corporation Scientifique Claisse (Booth 409)

Retsch Inc. in partnership with Corporation Scientifique Claisse will be presenting an exciting program which will include the following topics:

1:00 pm
Retsch – Sample Preparation Techniques for Reproducible and Accurate Analytical Results.
Proper sample preparation techniques are the only way to ensure that the analytical technique used results in meaningful and accurate results. The methods of sampling, sieving, and homogenizing samples for analysis will be discussed.

1:30 pm
Claisse – Basic Fusion Technology Concepts for Sample Preparation of Difficult Samples for ICP and Atomic Absorption Analysis.
The fusion method of sample preparation presents a quick, safe, easy to use alternative to digestion and microwave techniques for the preparation of solutions for normally difficult samples such as catalysts, geological, mining, ferroalloy and many other materials. The basics of fusion with application examples will be discussed.

2:00 pm
Retsch – Preparing Samples for AAS, ICP, or XRF.
We’ll address the requirements needed to prepare samples for these analytical techniques. Addressing these requirements will allow us to prepare and configure the ideal equipment for efficiently handling the material so that the resulting analysis will yield reproducible results.

2:30 pm
NJIT – Experimental and Computational Study of progress in Material Refinement by Mechanical Milling.
Special presentation by Priya R. Santhanam (graduate student) and Edward L. Dreizin (professor), Department of Chemical, Biological and Pharmaceutical Engineering, New Jersey Institute of Technology. Paper discusses experimental and computational processes used for Mechanical Milling. This technology is used to prepare a wide range of materials, including mechanically alloyed powders, chemicals synthesized by reactive milling, and reactive nano-composite powders prepared by arrested reactive milling.

3:00 pm
Claisse – Fusion Technology Products for Sample Preparation of Difficult Samples for ICP and Atomic Absorption Analysis.
The selection of different fusion products such as gas or electric powered fluxers, borate or peroxide fluxes, different non-wetting agents, oxidizers, and crucible materials necessary for the preparation of difficult samples for ICP/AA analysis will be discussed.
**Special Events in the 2010 EAS Exposition Area**

*(Continued)*

**3:30 pm**

**Retsch – Preparing API Samples for the Pharmaceutical Industry.**

Many pharmaceutical scientists believe that all soluble medicines have been discovered, so they have been searching for ways to allow their formulated medicines to have much higher ADME efficiencies. The main target for this goal is to grind API samples to nano-scale particles, which ultimately lead to higher ADME efficiencies for the drug. A discussion will be conducted on the equipment and techniques used to accomplish these goals.

**Tuesday, November 16, 2010**

**Dionex Corporation**

Davis Room – Garden State Exhibit Center Lobby

Visit the Dionex Field Laboratory* at EAS 2010 and learn more about our latest technologies in Ion Chromatography, UHPLC, and Automation

Stop by our Field Laboratory from 9 a.m. to 4 p.m. for individual demonstrations and discussions:

**10:00 am: Ion Chromatography:** Kirk Chassaniol will demonstrate a Dionex IC system running the new IonS-wift™ Max-100 monolith column specifically developed for the simultaneous determination of inorganic anions and organic acids in a variety of matrices.

**Noon: UHPLC Lunch ‘n Learn Session****: Matthew Neely will demonstrate the UltiMate® 3000 Rapid Separation LC (RSLC) system. He will analyze water- and fat-soluble vitamins in various enriched beverages using our x2 parallel technology.** Stop by booth 224 to register.

**2:00 pm: Charged Aerosol Detectors:** Kevin Courtemanche will present the Theory and Mechanics of Charged Aerosol Detectors and demonstrate many pertinent applications for the pharmaceutical industry. Kevin will also demonstrate the latest version of the Chromeleon® Chromatography Data System (CDS) software.

**Supelco/Sigma Aldrich**

**“Understanding Karl Fischer Titration”**

*Technical Seminar Hosted by*

**Supelco/Sigma-Aldrich (Booth #318)**

Tuesday, November 16, 2010

Time: 1:00 pm – 3:00 pm

Seminar is held in the McDivitt Room of the Garden State Convention Center, Somerset, NJ

The Karl Fischer titration is the most versatile and generally accepted analytical method for determining water content. It is independent of the sample’s state of matter and is therefore suitable for the analysis of solids, liquids, and gases. Critical to the accurate determination of water content is that the sample be soluble in the solvent mixture, the working pH of the system is not affected by the sample, and side reactions are avoided.

This seminar addresses the development and principles behind Karl Fischer analysis, the differences between the volumetric and coulometric approaches to water determination, good lab practices and proper technique, modifications to improve solubility, maintaining proper pH control, and problematic functional groups and the specialty reagents that allow for their analysis. Use of various standards to verify that the system is functioning properly and the benefits of routine maintenance will also be discussed.
Special Events in the 2010 EAS Exposition Area
(Continued)

Wednesday, November 17, 2010

Thermo Scientific
Davis Room – Garden State Exhibit Center Lobby
9:00 A.M. to 4:00 P.M.

Thermo Scientific Technology Day:

9:00 - 11:00 Molecular Spectroscopy
- Learn more about FT-IR, Raman, and NIR technologies with our applications experts.

11:30 - 1:30 Life Science Mass Spectrometry
- Primer on Linear Ion Traps: Why are They so Versatile?
- Introduction to the Triple Quadrupole Stage Mass Spectrometer: Applications and Uses
- High Resolution and Accurate Mass Basics: LTQ-Orbitrap

2:00 - 4:00 Trace Elemental Analysis
- Discuss the scope and context of USP’s proposed new chapters on elemental impurities, including chapters 231, 232, 233 and 730.
- Develop an understanding of how to optimize elemental measurement of ICP-OES and ICP-MS.
- Leave with a greater understanding of elemental impurity method development and validation.
- Interactive software and hardware demonstrations.

Register today at www.thermoscientific.com/eas

Waters
McDivitt Room – Garden State Exhibit Center Lobby
9:00 A.M. to 4:00 P.M.

Effective UPLC Implementation
John Smid
9:00-12:30

Start realizing all the benefits of ACQUITY UPLC and ACQUITY UPLC H-Class right away by attending this interactive session. This session will give you the knowledge and tools to ensure you are successful at implanting these powerful technologies as soon as you return to your laboratory. Topics include: Solvent Manager, Sample Manager, Detectors, Console, Startup and Column Chemistry.

Method Transfer from HPLC to UPLC
Ed Aig
1:30-2:30

As lab personnel make the transition from High Performance Liquid Chromatography (HPLC) to Ultra Performance Liquid Chromatography (UPLC) there are several things which must be considered. In this session we will discuss transferring and optimizing methods as one makes this transition.
## Eastern Analytical Symposium Presidents

<table>
<thead>
<tr>
<th>Year</th>
<th>Conference Number</th>
<th>President</th>
</tr>
</thead>
<tbody>
<tr>
<td>1959</td>
<td>1</td>
<td>William S. Levine</td>
</tr>
<tr>
<td>1960</td>
<td>2</td>
<td>George H. Morrison</td>
</tr>
<tr>
<td>1961</td>
<td>3</td>
<td>Saul Gordon</td>
</tr>
<tr>
<td>1962</td>
<td>4</td>
<td>Arnold Mowitz</td>
</tr>
<tr>
<td>1963</td>
<td>5</td>
<td>James F. Cosgrove</td>
</tr>
<tr>
<td>1964</td>
<td>6</td>
<td>Paul Lublin</td>
</tr>
<tr>
<td>1965</td>
<td>7</td>
<td>Charles W. Pifer</td>
</tr>
<tr>
<td>1966</td>
<td>8</td>
<td>David W. Robertson</td>
</tr>
<tr>
<td>1967</td>
<td>9</td>
<td>Edward G. Brame, Jr.</td>
</tr>
<tr>
<td>1968</td>
<td>10</td>
<td>Harold J. Pazdera</td>
</tr>
<tr>
<td>1969</td>
<td>11</td>
<td>George E. Heinz</td>
</tr>
<tr>
<td>1970</td>
<td>12</td>
<td>David A. Green</td>
</tr>
<tr>
<td>1971</td>
<td>13</td>
<td>Ivor L. Simmons</td>
</tr>
<tr>
<td>1972</td>
<td>14</td>
<td>Richard J. Knauer</td>
</tr>
<tr>
<td>1973</td>
<td>15</td>
<td>Louis M. Branccone</td>
</tr>
<tr>
<td>1974</td>
<td>—</td>
<td>Hal Ferrari</td>
</tr>
<tr>
<td>1975</td>
<td>16</td>
<td>Alexander N. Prezioso</td>
</tr>
<tr>
<td>1976</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1977</td>
<td>17</td>
<td>Kenneth D. Fleischer</td>
</tr>
<tr>
<td>1978</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1979</td>
<td>18</td>
<td>David L. Nash</td>
</tr>
<tr>
<td>1980</td>
<td>19</td>
<td>Melvin Goodman</td>
</tr>
<tr>
<td>1981</td>
<td>20</td>
<td>Arnold D. Lewis</td>
</tr>
<tr>
<td>1982</td>
<td>21</td>
<td>Hal Ferrari</td>
</tr>
<tr>
<td>1983</td>
<td>22</td>
<td>Concetta M. Paralusz</td>
</tr>
<tr>
<td>1984</td>
<td>23</td>
<td>J. P. Luongo</td>
</tr>
<tr>
<td>1985</td>
<td>24</td>
<td>Hal Ferrari</td>
</tr>
<tr>
<td>1986</td>
<td>25</td>
<td>Walton B. Caldwell</td>
</tr>
<tr>
<td>1987</td>
<td>26</td>
<td>S. David Klein</td>
</tr>
<tr>
<td>1988</td>
<td>27</td>
<td>Harvey S. Gold</td>
</tr>
<tr>
<td>1989</td>
<td>28</td>
<td>Richard Saferstein</td>
</tr>
<tr>
<td>1990</td>
<td>29</td>
<td>James McDivitt</td>
</tr>
<tr>
<td>1991</td>
<td>30</td>
<td>Stephen Scypinski</td>
</tr>
<tr>
<td>1992</td>
<td>31</td>
<td>Neil D. Jespersen</td>
</tr>
<tr>
<td>1993</td>
<td>32</td>
<td>Vincent Venturella</td>
</tr>
<tr>
<td>1994</td>
<td>33</td>
<td>Hercules Felder</td>
</tr>
<tr>
<td>1995</td>
<td>34</td>
<td>Karl Bratin</td>
</tr>
<tr>
<td>1996</td>
<td>35</td>
<td>Edward R. Davis</td>
</tr>
<tr>
<td>1997</td>
<td>36</td>
<td>Robert Femia</td>
</tr>
<tr>
<td>1998</td>
<td>37</td>
<td>Susan Kirby Friedman</td>
</tr>
<tr>
<td>1999</td>
<td>38</td>
<td>Julia Vasta–Russell</td>
</tr>
<tr>
<td>2000</td>
<td>39</td>
<td>Bruce McPherson</td>
</tr>
<tr>
<td>2001</td>
<td>40</td>
<td>Nicholas Snow</td>
</tr>
<tr>
<td>2002</td>
<td>41</td>
<td>Mary A. Kaiser</td>
</tr>
<tr>
<td>2003</td>
<td>42</td>
<td>Henrik Rasmussen</td>
</tr>
<tr>
<td>2004</td>
<td>43</td>
<td>Robert Ianniello</td>
</tr>
<tr>
<td>2005</td>
<td>44</td>
<td>Penelope Moore</td>
</tr>
<tr>
<td>2006</td>
<td>45</td>
<td>John L. Martin</td>
</tr>
<tr>
<td>2007</td>
<td>46</td>
<td>Robert Geise</td>
</tr>
<tr>
<td>2008</td>
<td>47</td>
<td>Kate Jackson Fletcher</td>
</tr>
<tr>
<td>2009</td>
<td>48</td>
<td>Donald O’Leary</td>
</tr>
<tr>
<td>2010</td>
<td>49</td>
<td>Julie Tinklenberg</td>
</tr>
<tr>
<td>2011</td>
<td>50</td>
<td>David A. Russell</td>
</tr>
<tr>
<td>2012</td>
<td>51</td>
<td>Cecil Dybowski</td>
</tr>
<tr>
<td>2013</td>
<td>52</td>
<td>Kim Huynh-Ba</td>
</tr>
</tbody>
</table>
The recipients of the Eastern Analytical Symposium Award for Outstanding Achievements in the Fields of Analytical Chemistry are:

1986: Dr. George H. Morrison
1987: Dr. Velmer A. Fassel
1988: Dr. J. Calvin Giddings
1989: Dr. David M. Hercules
1990: Dr. Allen J. Bard
1991: Dr. Alan G. Marshall
1992: Dr. Gary M. Hieftje
1993: Dr. Peter W. Carr
1994: Dr. Henry Freiser
1995: Dr. Royce Murray
1996: Dr. James Winefordner
1997: Dr. Richard N. Zare
1998: Dr. Edward S. Yeung
1999: Dr. Catherine Fenselau
2000: Dr. Milos Novotny
2001: Dr. Charles L. Wilkins
2002: Dr. William R. Heineman
2003: Dr. Howard F. McVay
2004: Dr. Bruce Chase
2005: Dr. Andrew Ewing
2006: Prof. M. S. Burnaby Munson
2007: Prof. Milton Lee
2008: Prof. Milton Denton
2009: Dr. M. Bonner Denton

The recipients of the Eastern Analytical Symposium Award for Achievements in Separation Science are:

1986: Dr. Csaba Horvath
1987: Dr. Halleem J. Issaq
1988: Dr. Milos Novotny
1989: Dr. Harold M. McNair
1990: Dr. Daniel Armstrong
1991: Dr. Robert L. Grob
1992: Dr. Daniel E. Martire
1993: Dr. J. Jack Kirkland
1994: Dr. Lloyd R. Snyder
1995: Dr. James W. Jorgenson
1996: Dr. Fred Regnier
1997: Dr. Barry L. Karger
1998: Dr. William H. Pirkle
1999: Dr. Milton L. Lee
2000: Dr. Peter W. Carr
2001: Dr. George A. Guiochon
2002: Dr. Karl A. Cramers
2003: Dr. Edward Yeung
2004: Dr. John G. Dorsey
2005: Dr. Francis A. Teves
2006: Dr. Phyllis R. Brown
2007: Prof. Peter Uden
2008: Prof. Pat J. Sandra
2009: Prof. Peter J. Schoenmakers

The recipients of the Eastern Analytical Symposium Award for Achievements in Near-Infrared Spectroscopy are:

1989: Mr. Karl Norris
1990: Dr. Donald Burns
1991: Dr. W. Fred McClure
1992: Dr. Lois G. Weyer
1993: Dr. H. Baughman
1994: Dr. Heinz W. Siesler
1995: Dr. William G. Fateley
1996: Dr. Harvey S. Gold
1997: Dr. Harold W. Wol
1998: Dr. Franklin E. Barton
1999: Dr. Philip Williams
2000: Dr. A.M.C. Davies
2001: Dr. K. K. Kato
2002: Dr. Jerome J. Workman
2003: Dr. Howard Mark
2004: Emil W. Ciucu
2005: Dr. Donald J. Dahm
2006: Prof. Gary Paiton
2007: Prof. Graeme Batten
2008: Dr. David W. Hopkins
2009: Mr. Edward Stark

The recipients of the Eastern Analytical Symposium Award for Achievements in Magnetic Resonance are:

1990: Dr. David Hoults
1991: Dr. John D. Roberts
1992: Dr. Ernst Shoolery
1993: Dr. James Shoolery
1994: Dr. Costantino S. Yannini
1995: Dr. Ad Bax
1996: Dr. John Waugh
1997: Dr. Paul C. Lauterbur
1998: Dr. Michael F. Summers
1999: Dr. Frank A. L. Anet
2000: Dr. Hans Wolfgang Sijbesma
2001: Dr. Raymond Freeman
2002: Dr. Aksel Bothner-By
2003: Dr. Stephen Fesik
2004: Dr. Gerhard Wagner
2005: Dr. Bot. Wise
2006: Dr. Paul Galadi
2007: Dr. Paul J. Germerline
2008: Dr. Rasmus Bro
2009: Dr. David M. Haaland
2010: Dr. Age K. Smilde
2011: Prof. Philip Hopke
2012: Prof. John F. MacGregor
2013: Prof. Roma Tauler

The recipients of the Eastern Analytical Symposium Award for Outstanding Achievements in Chromatography are:

1996: Dr. Steven D. Brown
1997: Dr. Torlon Nies
1998: Dr. Edmund R. Malinowski
1999: Dr. Harald Martens
2000: Dr. Svante Wold
2001: Dr. Bot. Wise
2002: Dr. Paul Galadi
2003: Dr. Paul J. Germerline
2004: Dr. Rasmus Bro
2005: Dr. David M. Haaland
2006: Dr. Age K. Smilde
2007: Prof. Philip Hopke
2008: Prof. John F. MacGregor
2009: Prof. Roma Tauler

The recipients of the Eastern Analytical Symposium Award for Outstanding Achievements in Mass Spectrometry are:

2007: Prof. Mark Cooks
2008: Prof. Jack Henton
2009: Prof. Alan G. Marshall

The recipients of the Eastern Analytical Symposium Award for Outstanding Achievements in Applied Spectroscopy are:

1956: Dr. Norman Wright
1957: Mr. Frank Twyman
1958: Dr. Herbert Friedman
1959: Dr. Gerhard Herzberg
1960: Dr. George Buc and Dr. Frederick Strong, III
1961: Mr. Bourdon F. Scribner
1962: Dr. Mary Warga
1963: Dr. Earle K. Pyle
1964: Dr. Velmer A. Fassel
1965: Dr. Melvin G. Mellon
1966: Mr. George G. Hoak
1967: Mr. LaVerne S. Birks
1968: Mr. Willis J. Potts, Jr.
1969: Dr. Robert H. Bell
1970: Dr. John R. Ferraro
1971: Dr. Charles Jedicka
1972: Dr. David N. Kendall
1973: Dr. Klaus Biemann
1974: Dr. George H. Morrison
1975: Dr. George H. Morrison
1976: Dr. George H. Morrison
1977: Dr. Darwin L. Wood
1978: Dr. Bernard J. Bulkin
1979: Dr. N. J. Harrick
1980: Dr. M. T. J. Haycox
1981: Dr. Ron Jenkins
1982: Dr. C. Comar N. Patel
1983: Dr. Abraham Savitzky
1984: Dr. John F. MacGregor
1985: Dr. Linda J. Cline
1986: Dr. Paul C. Lauterbur
1987: Dr. William G. Fateley
1988: Dr. Thomas V. Ho-Dinh
1989: Dr. James D. Winefordner
1990: Dr. Daniel Boone
1991: Dr. I. S. M. Warner
1992: Dr. John D. Roberts
1993: Dr. Michael D. Morris
1994: Dr. Linda B. McGown
1995: Dr. Peter W. Griffiths
1996: Dr. Charles Wilkins
1997: Dr. K. T. Nishikawa
1998: Dr. Alan G. Marshall
1999: Dr. Chieko Tran
2000: Dr. James Wilson
2001: Dr. Karl Norris
2002: Dr. Joel M. Harris
2003: Dr. Craig V. Bright
2004: Dr. Gary M. Hieftje
2005: Dr. Mary J. Wirth
2006: Dr. Ira W. Levin
2007: Dr. Paul Wilks
2008: Prof. John F. Rabolt
2009: Dr. Isao Noda

The recipients of the Eastern Analytical Symposium Award for Outstanding Achievements in Microspectroscopy are:

1966: Dr. J. F. A. Ficin
1967: Dr. Felix L. Schneider
1968: Dr. W. Kirkland
1969: Dr. B. B. Cunningham
1970: Dr. Darrell McCroskey
1971: Dr. L. T. Skeggs
1972: Dr. L. C. Craig
1973: Dr. D. E. Sawa
1974: Dr. Pet Zotman
1975: Dr. T. S. Ma
1976: Dr. George H. Morrison
1977: Dr. Joseph Jordan
1978: Dr. A. St. Meyer
1979: Dr. H. Alber
1980: Dr. R. Flashka
1981: Dr. Peter F. Lott
1982: Dr. W. L. Biam
1983: Dr. Bennie Zak
1984: Dr. Lockhart "Buck" Rogers
1985: Dr. Wilhelm Simon
1986: Dr. Robert S. Hercules
1987: Dr. Richard F. Browner
1988: Mr. K. L. Cheng
1989: Dr. Peter W. Carr
1990: Dr. Nicholas Winograd
1991: Dr. Robert T. Kennedy
1992: Dr. Robert G. Michal
1993: Dr. Peter C. Uden
1994: Dr. I. S. M. Warner
1995: Dr. Leslie Colin Ebdon
1996: Dr. Daniel Armstrong
1997: Dr. John Dorsey
1998: Dr. Purnendu K. Dasgupta
1999: Dr. Jonathan V. Smedley
2000: Dr. J. Mooney
2001: Dr. Robert T. Kennedy
2002: Mr. Fred M. Hawridge
2003: Dr. Joseph Sneddon
2004: Dr. Jorge Gayoso
2005: Dr. Frank Bright
2006: Prof. Steven A. Soper
2007: Prof. Robin Garrett
2008: Prof. Janusz Pawliszyn
2009: Prof. Yong-I Lee

The recipients of the Ernst Abbe Memorial Award of the New York Microscopical Society are:

2006: Dr. J. C. Rass
2007: Prof. Webb
## Author Index

### A
- Aaron, Elizabeth ................................................................. 53
- Abarca, Donna ................................................................. 351
- Abberley, Lee ....................................................................... 23
- Acree, Terry E. .................................................................... 191
- Acworth, Ian ........................................................................ 56, 97, 210, 349, 352
- Adam, Gerhard ................................................................. 98
- Adar, Fran .............................................................................. 41
- Agroskin, Yuri ....................................................................... 325
- Alexander, Anthony .................................................................. 33
- Alfeld, Matthias ....................................................................... 9
- Allison, John .......................................................................... 310, 408
- Almer, Jonathan ...................................................................... 108
- Alquier, Lori ........................................................................... 443
- Al-Sayah, Mohammad ............................................................... 117, 125
- Altan, Stan ............................................................................. 456
- Amiri, Kevin ........................................................................... 216
- Amoss, Clinton W. .................................................................. 415
- Amuah, Charles L.Y. ................................................................. 315
- Anderson, Brad ....................................................................... 19
- Anderson, Carl A. .................................................................. 119, 123, 173, 450
- Andrews, Darren ..................................................................... 168
- Andria, Sara E. ........................................................................ 186
- Anne, Michel ........................................................................... 106
- Anspach, Jason ....................................................................... 327
- Antonucci, Vincent ................................................................. 346, 416
- Anzelmo, John A. .................................................................. 447
- Apedo, Atsu ............................................................................ 126, 206
- Ara, Gulshan ........................................................................... 459
- Arbuckle-Keil, Georgia A. ...................................................... 35, 82, 166
- Arno, Jose ............................................................................... 434
- Arnold, Don W. ...................................................................... 18, 44
- Arora, Ritu ............................................................................... 218
- Atkins, Patricia ....................................................................... 300
- Aubuchon, Steven R. ............................................................... 131
- Audet, Chantal ....................................................................... 447
- Aurand, Craig .......................................................................... 444
- Barnhardt, Keller ...................................................................... 114
- Baron, Michelle A. ................................................................ 358
- Bassner, Sherri L. .................................................................. 282
- Batson, JaCinta S. ................................................................ 186
- Bau, Haim H. ......................................................................... 22
- Bedard, Vincent ...................................................................... 230, 375
- Begue, Nathan J. .................................................................... 452
- Bek, Fritz ................................................................................ 45
- Beland, Francois ..................................................................... 230, 375
- Bell, David ............................................................................. 159
- Belue, Brady .......................................................................... 364
- Benedict, Jared ....................................................................... 220
- Bentil, Ekuu N. ...................................................................... 315
- Bergmann, Uwe ...................................................................... 107
- Bernardoni, Frank ................................................................... 157
- Berthiller, Franz ...................................................................... 98
- Bertrand, Loïc ........................................................................ 11
- Best, Steve ............................................................................. 341
- Bhadra, Madhuleena ................................................................ 63
- Bhargava, Rohit ....................................................................... 269, 475
- Bhashyam, Rekha ................................................................... 208
- Bhawankar, Prashanthi ........................................................... 480
- Biba, Mirlinda .......................................................................... 328, 484
- Bidlingmeyer, Brian ............................................................... 245
- Blackney Beckett, Donna M. .................................................. 43, 360
- Blanc, Sylvie ........................................................................... 106
- Blanton, John .......................................................................... 377
- Bloomfield, Matthew ............................................................. 168
- Bogenschuetz, German ............................................................ 197, 200
- Bogost, Ian ............................................................................ 152
- Bohn, Paul W. ....................................................................... 420
- Boice, Jennifer ........................................................................ 21
- Booksh, Karl .......................................................................... 297
- Bordat, Patrice ........................................................................ 106
- Borek III, Theodore T. .............................................................. 455
- Both, Douglas ......................................................................... 31, 87, 123
- Botnjic-Sehic, Edita ................................................................. 433
- Botros, Lucy ........................................................................... 472
- Bourne, Sidney ....................................................................... 36, 78, 79
- Boust, Clotilde ........................................................................ 153
- Bowden, Christie .................................................................... 95
- Bowen, William E. ................................................................. 256
- Boyes, Barry E. ....................................................................... 57
- Brandes, Hillel ......................................................................... 329
- Brennen, Reid .......................................................................... 45
- Brettell, Thomas A. ................................................................. 260
- Bright, Frank V. ..................................................................... 418
- Brkovic, Tanja ......................................................................... 411
- Bro, Rasmus ........................................................................... 380
- Broad, Neville ......................................................................... 184
- Brouillette, Carl ....................................................................... 39, 454
- Broussard, Michael A. ............................................................. 88

### B
- Baccier, Christina M. ............................................................... 32
- Bailey, Bruce .......................................................................... 56, 97, 210, 349, 352
- Baker, Derrick ......................................................................... 314
- Baker, Jared S. ........................................................................ 227, 313
- Balasubramanian, Balu ........................................................... 204
- Balasubramanian, Kalaiselvi .................................................. 62, 490
- Bandlamudi, Vijaya .................................................................. 443
- Baney, Greg A. ....................................................................... 175, 178
- Bansal, Navin .......................................................................... 4
- Bansal, Veena .......................................................................... 334
- Barclay, David ......................................................................... 374
- Bardsley, Roger N. .................................................................. 357, 363
- Barnes, Brian B. ...................................................................... 308, 429
- Barnhardt, Keller ...................................................................... 114
- Baron, Michelle A. ................................................................ 358
- Bassner, Sherri L. .................................................................. 282
- Batson, JaCinta S. ................................................................ 186
- Bau, Haim H. ......................................................................... 22
- Bedard, Vincent ...................................................................... 230, 375
- Begue, Nathan J. .................................................................... 452
- Bek, Fritz ................................................................................ 45
- Beland, Francois ..................................................................... 230, 375
- Bell, David ............................................................................. 159
- Belue, Brady .......................................................................... 364
- Benedict, Jared ....................................................................... 220
- Bentil, Ekuu N. ...................................................................... 315
- Bergmann, Uwe ...................................................................... 107
- Bernardoni, Frank ................................................................... 157
- Berthiller, Franz ...................................................................... 98
- Bertrand, Loïc ........................................................................ 11
- Best, Steve ............................................................................. 341
- Bhadra, Madhuleena ................................................................ 63
- Bhargava, Rohit ....................................................................... 269, 475
- Bhashyam, Rekha ................................................................... 208
- Bhawankar, Prashanthi ........................................................... 480
- Biba, Mirlinda .......................................................................... 328, 484
- Bidlingmeyer, Brian ............................................................... 245
- Blackney Beckett, Donna M. .................................................. 43, 360
- Blanc, Sylvie ........................................................................... 106
- Blanton, John .......................................................................... 377
- Bloomfield, Matthew ............................................................. 168
- Bogenschuetz, German ............................................................ 197, 200
- Bogost, Ian ............................................................................ 152
- Bohn, Paul W. ....................................................................... 420
- Boice, Jennifer ........................................................................ 21
- Booksh, Karl .......................................................................... 297
- Bordat, Patrice ........................................................................ 106
- Borek III, Theodore T. .............................................................. 455
- Both, Douglas ......................................................................... 31, 87, 123
- Botnjic-Sehic, Edita ................................................................. 433
- Botros, Lucy ........................................................................... 472
- Bourne, Sidney ....................................................................... 36, 78, 79
- Boust, Clotilde ........................................................................ 153
- Bowden, Christie .................................................................... 95
- Bowen, William E. ................................................................. 256
- Boyes, Barry E. ....................................................................... 57
- Brandes, Hillel ......................................................................... 329
- Brennen, Reid .......................................................................... 45
- Brettell, Thomas A. ................................................................. 260
- Bright, Frank V. ..................................................................... 418
- Brkovic, Tanja ......................................................................... 411
- Bro, Rasmus ........................................................................... 380
- Broad, Neville ......................................................................... 184
- Brouillette, Carl ....................................................................... 39, 454
- Broussard, Michael A. ............................................................. 88
Brown, Christopher D. ........................................ 359, 451
Brown, James M.................................................. 322
Brown, Robert G.................................................. 132
Brown, Ross ......................................................... 106
Brown, Steven D.................................................. 293
Brueggemeyer, Thomas W..................................... 186
Brush, Robert C..................................................... 359
Bryant, Matthew .................................................. 54
Bu, Dongsheng ...................................................... 87
Bu, Xin (Amy) ....................................................... 120
Buckley, Barbara .................................................... 104
Buckley, Brian ....................................................... 431
Budevska, Boiana O.............................................. 319
Bukowski, Nick ........................................................ 90, 92
Burka, Michael ...................................................... 474
Burnett, Daniel J..................................................... 366
Bushra, Rani .......................................................... 331
Butler, Therese A..................................................... 332
Bynum, Maggie ...................................................... 45
Cacoq, Cassandra ................................................... 21
Cagno, Simone ....................................................... 9
Calverley, Richard .................................................. 370, 371
Camacho-Páez, José ............................................... 379
Cameron, Chad ...................................................... 94
Camillone III, Nicholas ........................................... 265
Campbell, William .................................................. 140
Cantor, Robin ........................................................ 466
Cappellaro, Paola ..................................................... 111
Caprioi, Richard M................................................. 103
Carlage, Tyler ....................................................... 458
Carle, A. Bjoern ...................................................... 368, 369
Carlson, Bill ........................................................... 78, 79
Carlson, Richard E.................................................. 65, 445
Carlton, Robert A..................................................... 424
Carson, Bill ........................................................... 36
Casadio, Francesca .................................................. 108
Casado-Rivera, Emerlis .......................................... 192
Cauchoin, Nina S..................................................... 367
Centeno, Silva ......................................................... 399
Chakrabarti, Atis ..................................................... 222
Chaloupka, Lukas .................................................... 217
Chambers, Erin E..................................................... 55, 59
Chambers, Laura ..................................................... 67
Chan, Fred ............................................................. 208
Chappell, William .................................................... 102
Chariton, Shauna A.................................................. 221
Chase, D. Bruce ...................................................... 320
Chassaniol, Kirk ...................................................... 142, 325, 336
Chatterjee, Moneesh ............................................... 302
Chatterjee, Subhasish .............................................. 304
Chen, Hao ............................................................. 274
Chen, Jiawei .......................................................... 99
Chen, Quan .......................................................... 432
Chen, Xin ............................................................. 226
Chen, Young ........................................................ 444
Chen, Zhi ............................................................. 208
Chetwyn, Nik P....................................................... 48
Chitty, Mike ........................................................... 327
Cho, Kyohong ......................................................... 457
Choi, Seok-Bong ..................................................... 218
Christison, Terri T.................................................... 179
Chun, Jonathan ....................................................... 286
Churchwell, Larry ................................................... 344
Cierone, David ....................................................... 23
Ciuczek, Emil ......................................................... 382
Clark, Alexander E............................................... 310
Clark, David ......................................................... 56, 97, 210, 349, 352
Clark, Doug .......................................................... 342
Clark, Mark ........................................................... 230, 375
Cohen, Serge ......................................................... 11
Cole, Renee .......................................................... 409
Collier, Steven M..................................................... 203
Collins, Jr., Michael ................................................ 114
Colón, Luis A........................................................ 227, 313, 324
Connors, Lawrene H.............................................. 147
Conte, Lisa ........................................................... 401
Cooks, R. Graham ................................................... 102
Corradini, Roberto .................................................. 98
Corredor, Claudia ................................................... 87
Coryell, Bruce R..................................................... 415
Costello, Catherine E............................................ 147
Cotte, Marine ........................................................ 9
Cox, Geoffrey B..................................................... 415
Coy, Jason W........................................................ 221
Crafts, Christopher .............................. 56, 97, 210, 349, 352
Cramer, Jeffrey A................................................... 452
Crandall, John A..................................................... 176
Cristodoulatos, Christos ......................................... 214
Cuellar, Maryann E................................................ 131, 273
Cuff, James .......................................................... 411

D
Daffner, Lee Ann .................................................... 400
Daigne, Philippe .................................................... 447
Darienzo, Celia ....................................................... 29
Darrington, Rob ..................................................... 68
DaSilva, Patricia ..................................................... 74
Davidowski, Lee ..................................................... 280
Davilla, Scott D....................................................... 465
Davis, Aaron ........................................................ 368, 369
Davis, Kevin L......................................................... 273, 321
Dazord, Cecile ......................................................... 153
de Borba, Brian ...................................................... 50, 179, 196, 336
Degam, Ganesh ...................................................... 19
Dejoie, Catherine ................................................. 106
Delwiche, Stephen R.............................................. 289, 318
Demirev, Plamen A................................................ 12
Desbrow, Claire ..................................................... 370, 371
Deshmukh, Balasaheb ............................................. 468
Desiderio, Vincent J.............................................. 261
<table>
<thead>
<tr>
<th>Name</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desorcie, James L.</td>
<td>66, 175</td>
</tr>
<tr>
<td>Despotopoulou, Marina</td>
<td>95, 284</td>
</tr>
<tr>
<td>Dewey, Dave</td>
<td>434</td>
</tr>
<tr>
<td>Dhingra, Sandeep</td>
<td>468</td>
</tr>
<tr>
<td>Diaczuk, Peter</td>
<td>395</td>
</tr>
<tr>
<td>Dias, Neil</td>
<td>442</td>
</tr>
<tr>
<td>Díaz, Ángel R.</td>
<td>258</td>
</tr>
<tr>
<td>Diehl, Bradley</td>
<td>386</td>
</tr>
<tr>
<td>Diehl, Diane M.</td>
<td>55, 59, 350</td>
</tr>
<tr>
<td>Dighton, John</td>
<td>82</td>
</tr>
<tr>
<td>Dik, Joris</td>
<td>9</td>
</tr>
<tr>
<td>Dilger, Katherine</td>
<td>74</td>
</tr>
<tr>
<td>Dillmann, Philippe</td>
<td>8</td>
</tr>
<tr>
<td>Dimandja, John</td>
<td>133</td>
</tr>
<tr>
<td>DiNallo, Danielle</td>
<td>283</td>
</tr>
<tr>
<td>Dioumaeva, Irina</td>
<td>218</td>
</tr>
<tr>
<td>Distefano, James</td>
<td>205</td>
</tr>
<tr>
<td>Divan, Khalil (Ginger)</td>
<td>336</td>
</tr>
<tr>
<td>Dobbs, Craig H.</td>
<td>438</td>
</tr>
<tr>
<td>Donahue, Michael</td>
<td>39, 454</td>
</tr>
<tr>
<td>Dong, Michael</td>
<td>48</td>
</tr>
<tr>
<td>Donovan, Brent</td>
<td>259</td>
</tr>
<tr>
<td>Dooryhee, Eric</td>
<td>106</td>
</tr>
<tr>
<td>Dorich, Brian C.</td>
<td>65, 445</td>
</tr>
<tr>
<td>Dowthwaite, Gary</td>
<td>370, 371</td>
</tr>
<tr>
<td>Drapcho, David</td>
<td>42</td>
</tr>
<tr>
<td>Drazenovic, Jelena</td>
<td>212, 457</td>
</tr>
<tr>
<td>Drennen III, James K.</td>
<td>119, 123, 173, 450</td>
</tr>
<tr>
<td>Dresssi, Diego</td>
<td>10</td>
</tr>
<tr>
<td>Dubodel, Alexandria</td>
<td>400</td>
</tr>
<tr>
<td>Dubois, Janie</td>
<td>270</td>
</tr>
<tr>
<td>Dunn, David</td>
<td>36, 79</td>
</tr>
<tr>
<td>Durand, Richard R.</td>
<td>285</td>
</tr>
<tr>
<td>Dybowski, Cecil</td>
<td>6, 388</td>
</tr>
</tbody>
</table>

**E**

<table>
<thead>
<tr>
<th>Name</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eghan, Moses J.</td>
<td>315</td>
</tr>
<tr>
<td>Eltzer, Brian D.</td>
<td>187</td>
</tr>
<tr>
<td>Engelhart, Gary</td>
<td>67, 75, 333</td>
</tr>
<tr>
<td>Erickson, Jacqueline</td>
<td>469</td>
</tr>
<tr>
<td>Esser, Mark</td>
<td>24</td>
</tr>
<tr>
<td>Evans, Ronald A.</td>
<td>14</td>
</tr>
</tbody>
</table>

**F**

<table>
<thead>
<tr>
<th>Name</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fadeev, Alexander Y.</td>
<td>157</td>
</tr>
<tr>
<td>Fang, Fang</td>
<td>104</td>
</tr>
<tr>
<td>Fang, Jiangu B.</td>
<td>367</td>
</tr>
<tr>
<td>Farkas, Tivadar</td>
<td>327</td>
</tr>
<tr>
<td>Farquharson, Stuart</td>
<td>39, 42, 309, 454</td>
</tr>
<tr>
<td>Feng Kung-I</td>
<td>353</td>
</tr>
<tr>
<td>Ferrer-Riquelme, Alberto</td>
<td>379</td>
</tr>
<tr>
<td>Ferzoco, Alessandra L.</td>
<td>244</td>
</tr>
<tr>
<td>Fiedler, Inge</td>
<td>108</td>
</tr>
<tr>
<td>Finkelstein, Kenneth</td>
<td>104</td>
</tr>
<tr>
<td>Fish, Caryl</td>
<td>410</td>
</tr>
<tr>
<td>Fitch, Alannah</td>
<td>406</td>
</tr>
<tr>
<td>Fitchett, Arthur</td>
<td>137</td>
</tr>
<tr>
<td>Florio, Gina</td>
<td>165</td>
</tr>
<tr>
<td>Foley, Joe P.</td>
<td>43, 139, 211, 328, 360</td>
</tr>
<tr>
<td>Fossum, Tore</td>
<td>338, 339, 365</td>
</tr>
<tr>
<td>Foster, Fredrick D.</td>
<td>376</td>
</tr>
<tr>
<td>Foulk, Susan J.</td>
<td>44</td>
</tr>
<tr>
<td>Fountain III, Kenneth J.</td>
<td>52, 203, 229, 330</td>
</tr>
<tr>
<td>France, Fenella</td>
<td>154</td>
</tr>
<tr>
<td>Francis, Eric S.</td>
<td>65, 445</td>
</tr>
<tr>
<td>Frohnhert, Christine</td>
<td>401</td>
</tr>
<tr>
<td>Fryshinger, Glenn S.</td>
<td>134, 296</td>
</tr>
<tr>
<td>Fuqua, Ronald</td>
<td>235</td>
</tr>
</tbody>
</table>

**G**

<table>
<thead>
<tr>
<th>Name</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gaillard, Jean-Francois</td>
<td>108</td>
</tr>
<tr>
<td>Gall, Karen E.</td>
<td>312</td>
</tr>
<tr>
<td>Gallagher, Kimberly</td>
<td>257</td>
</tr>
<tr>
<td>Gallagher, Neal B.</td>
<td>380</td>
</tr>
<tr>
<td>Gallitto, Matthew</td>
<td>215</td>
</tr>
<tr>
<td>Gamache, Paul</td>
<td>56, 97</td>
</tr>
<tr>
<td>Gamache, Yves</td>
<td>181</td>
</tr>
<tr>
<td>Ganapathy, Jeevaprakash</td>
<td>490</td>
</tr>
<tr>
<td>Gandhi, Jay</td>
<td>73, 198, 199, 200, 201</td>
</tr>
<tr>
<td>Ganley, Jason</td>
<td>314</td>
</tr>
<tr>
<td>Gao, Qi</td>
<td>392</td>
</tr>
<tr>
<td>Garcia, Armando R.</td>
<td>366</td>
</tr>
<tr>
<td>Garcia, Dana</td>
<td>86</td>
</tr>
<tr>
<td>Gargus, Greg</td>
<td>88</td>
</tr>
<tr>
<td>Garner, Dennis</td>
<td>471</td>
</tr>
<tr>
<td>Garrel, Robin L.</td>
<td>398, 421</td>
</tr>
<tr>
<td>Gau, Brian</td>
<td>99</td>
</tr>
<tr>
<td>Gaughan, Edward</td>
<td>160</td>
</tr>
<tr>
<td>Geise, Robert</td>
<td>281</td>
</tr>
<tr>
<td>Gumperline, Paul</td>
<td>377</td>
</tr>
<tr>
<td>George, Matthew</td>
<td>234</td>
</tr>
<tr>
<td>Gervasio, Gregory</td>
<td>272</td>
</tr>
<tr>
<td>Gillece-Castro, Beth L.</td>
<td>229</td>
</tr>
<tr>
<td>Gilliam, Sean</td>
<td>273, 321</td>
</tr>
<tr>
<td>Giodano, Jennifer</td>
<td>185</td>
</tr>
<tr>
<td>Giuffre, Bob</td>
<td>440</td>
</tr>
<tr>
<td>Glish, Gary L.</td>
<td>244</td>
</tr>
<tr>
<td>Gmachl, Claire F.</td>
<td>315, 316</td>
</tr>
<tr>
<td>Goldstein, Garry</td>
<td>111</td>
</tr>
<tr>
<td>Gong, Xiaoyi</td>
<td>411, 484</td>
</tr>
<tr>
<td>González-Martinez, José M.</td>
<td>379</td>
</tr>
<tr>
<td>Gorecki, Tadeusz</td>
<td>136</td>
</tr>
<tr>
<td>Goresh, Sharon L.</td>
<td>425</td>
</tr>
<tr>
<td>Gorman, Steve</td>
<td>53</td>
</tr>
<tr>
<td>Granger, Alice T.</td>
<td>372</td>
</tr>
<tr>
<td>Green, Cierra</td>
<td>306, 429</td>
</tr>
<tr>
<td>Green, Robert L.</td>
<td>451</td>
</tr>
<tr>
<td>Gregson, Christopher</td>
<td>491</td>
</tr>
<tr>
<td>Griffiths, John</td>
<td>339</td>
</tr>
<tr>
<td>Grinberg, Nelu</td>
<td>159</td>
</tr>
<tr>
<td>Grohse, Peter M.</td>
<td>72</td>
</tr>
<tr>
<td>Grondine, Melissa</td>
<td>412, 485</td>
</tr>
</tbody>
</table>
Gross, Michael ................................................... 99
Groszer, Zoe .......................................................... 280
Grove, Geoffrey N. .................................................. 477
Grzywacz, Cecily M. .................................................. 398
Gu, Helen .......................................................... 234
Guazzotti, Sergio ................................................. 49, 307
Guilloy-Gardner, Paulette .......................................... 40
Guise, Olivier .......................................................... 127
Gunn, David .......................................................... 64
Gurney, Richard ................................................... 21
Guzman, Norberto .................................................... 138

H
Haber, Kenneth S. .................................................. 270
Haddouchi, Samir ................................................... 477
Haeffler, Dean .......................................................... 108
Haffner, Jessica ................................................... 21
Haibach, Frederick G. .................................................. 169
Haider, Christian .................................................. 361
Hall, Mark .......................................................... 462
Hall, Gregory J. ................................................... 134, 296
Han, Qing Ping ..................................................... 483
Hancock, William S. .................................................. 458
Harris, Joel M. ..................................................... 389, 422
Hartini, Angelina .................................................. 121
Hartlein, Tom .......................................................... 357
Hartman, Robert .................................................. 117
Hashmi, Omar I. ..................................................... 221
Hayward, Mark J. ................................................... 483
He, Hui .................................................................... 353
He, Xueying .......................................................... 317
He, Yi .................................................................... 242
He, Zhihua ........................................................... 474
Heaps, David .......................................................... 387
Hedgepeth, William .................................................. 91, 209
Heim, John .............................................................. 135
Helfen, Lucas ........................................................... 9
Helmy, Roy ............................................................. 117, 124, 125, 346, 416
Hendricks, Paul ...................................................... 102
Henry, Richard A. .................................................... 140, 223, 247, 329
Henson, Mark .......................................................... 472
Herbert, Bryon ......................................................... 297
Herbert, Nicole .......................................................... 44
Hewitson, Hillary B. .................................................... 52
Hicks, Jeremiah C. ..................................................... 314
Hicks, Michael B. ..................................................... 126, 206
Hill, Whitney ............................................................ 394
Hillery, Barbara ......................................................... 236
Hively, Dean ............................................................. 318
Hiyoshi, Yayoi .......................................................... 232
Hobbs, Don .............................................................. 342
Hobbs, Steve ............................................................. 18
Hodges, Jonathan S. .................................................. 111
Hodgkins, Robyn E. ................................................... 398
Hoffman, Ronald M. .................................................. 377
Hollingsworth, Tristan .................................................. 74
Holub, David ........................................................... 412
Hong, Paula ............................................................. 52
Hong, Zhenning ....................................................... 147
Hooker, Thomas F. ..................................................... 33, 355
Hopkins, Dave .......................................................... 383
Hosten, Charles ....................................................... 314
Hottonstein, Charles S. .................................................. 23
Hou, Keyong ............................................................ 102
Hsieh, Chun ............................................................. 377
Huang, Hermes ....................................................... 309
Huang, Jimmo ......................................................... 205
Huang, Stella ........................................................... 302, 303
Huang, Xueying ....................................................... 234
Hue, Kerri-Ann .......................................................... 337
Huffman, Scott W. ..................................................... 437
Humphreys, Griff ....................................................... 303
Hurrum, Deanna ......................................................... 50
Hurst, William ............................................................ 189
Hvizd, Michael G. ...................................................... 137

I
Iarriccio, Anthony J. ..................................................... 34
Igumenova, Tatyana .................................................... 110
Ilitchev, Yuri V. .......................................................... 430
Infusini, Giuseppe ....................................................... 147
Inge, Benoît .............................................................. 450
Ingle, Jack ............................................................... 162
Inscore, Frank ........................................................... 309, 454
Ip, Jason ................................................................. 475
Iwunze, Maurice ....................................................... 492

J
Jablonski, Jo-Ann M. .................................................... 203
Jacksier, Tracey .......................................................... 343, 344
Jackson, George ......................................................... 306
Jackson, Richard S. ..................................................... 182
Jansen-Varnum, Susan .................................................. 212, 213, 340, 457
Janssens, Koen .......................................................... 9
Jenkins, Herb ............................................................. 346
Jennings, Scott ........................................................... 33
Ji, Haifeng Frank ......................................................... 167
Jiang, Gui Feng .......................................................... 307
Jiang, Liang .............................................................. 111
Ji Ji, Renee .............................................................. 295
Jin, Hyun Woo (Howie) .................................................. 311
Joh, Katherine ........................................................... 457
John, Christopher .......................................................... 32
Johnson, Kelly ............................................................ 223
Johnson, Kim ............................................................. 302
Johnson, Peter ............................................................ 249
Johnson, William L. ..................................................... 225
Joiner, David ............................................................. 377
Jones, Peter .............................................................. 198
Jones, Rhys D. ........................................................... 370, 371
Jordan, Steve .............................................................. 370, 371
Joyce, David A. .......................................................... 341

66
Judge, Kevin ........................................... 472
Jurek, Anne ............................................. 193
Juzwak, Ted ............................................. 464
Kaiser, Bruce ........................................... 237
Kalyanaraman, Ravi .................................. 183
Kammrath, Brooke W. .................................. 262
Kansiz, Mustafa ......................................... 166
Kaplan, Desmond ....................................... 244
Karger, Barry ............................................ 146
Karikari, Nana ........................................... 314
Karpinski, Paul .......................................... 214
Kashida, Akiko ........................................... 232
Kassan, Scott ............................................. 94
Kassis, Abe ............................................... 480
Kazakevich, Yuri ........................................ 158
Keaney, Tom ............................................. 36, 83
Kehler, Jonathan ......................................... 26
Kelly, Richard S. .......................................... 238
Kennedy, Nora ............................................ 399
Kibelka, Gottfried ........................................ 94
Kidder, Linda H. .......................................... 270
Killeen, Kevin ............................................ 45
Kim, Seong-Soo .......................................... 297
Kiplinger, Jeffrey P. ..................................... 486
Kirkland, Joseph J. ....................................... 57
Kleintop, Brent ............................................ 479
Klinge, Lindsey ........................................... 241
Klinzing, Gerald .......................................... 426
Klug, Christopher A ..................................... 3
Knowles, David E ........................................ 65, 118, 445
Knudsen, Vita .............................................. 413
Kodali, Anil ................................................. 269
Koenigbauer, Mike L ..................................... 293
Kohler, David .............................................. 486
Koppenaal, David W ..................................... 148
Kornfeld, Richard ........................................ 195, 196
Kosjek, Birgit .............................................. 411
Kraiczek, Karsten K. .................................... 45
Krishnamoorthy, Arunagiri ............................... 362
Krishnan, Sadogopan .................................... 405
Kirshner, Theresa ........................................ 377
Krska, Rudolf .............................................. 98
Kulnis, Greg ................................................. 24
Kumar, Ravindra .......................................... 334
Kuriyama, Naohiro ...................................... 231, 232
Kurtyka, Bogdan .......................................... 288
L
Lacinak, Chris ............................................. 151
LaCourse, William ....................................... 404
Lakshmanan, Dheivanai ................................ 490
Lakshmi, K. V. ............................................ 109
Lalancette, Roger A. .................................... 260
Lame, Mary E. ............................................. 55
Lanaan, Maureen ......................................... 293
Lane, Jeffrey R. .......................................... 75, 333
Lang, Megan .............................................. 318
Langley, Philip ........................................... 347
Langlois, Timothy J ....................................... 225
Languille, Marie-Angélique ............................. 11
Lantz, Juliette ............................................. 409, 410
Laraoui, Abdelghani ...................................... 111
Lauro, Mackenzie L ....................................... 190, 243
Law, Stephen .............................................. 363
Leary, Pauline E .......................................... 262
Leckrone, Kristen ......................................... 407
Lee, Claire .................................................. 125, 346
Lee, Eunah ............................................... 41
Lee, Heewon ................................................ 159
Lee, Kathryn A ............................................ 299
Lee, Nancy .................................................. 21
Lefebvre, Paul M .......................................... 486
Leith, Leslie ................................................ 204
Leslie, Cynthia R .......................................... 192
Levesque, Charles ....................................... 230, 375
Levesque, Dominique ................................... 447
Lewis, E. Neil ............................................. 270
Lewis, Ian R ................................................ 273, 321
Li, Fei ......................................................... 112, 345
Li, Fumin .................................................... 28
Li, Hui ......................................................... 122
Li, Li ......................................................... 358, 439
Li, Peng ....................................................... 204
Li, Weiying ................................................ 170, 385
Libardoni, Mark .......................................... 135
Liberator, Paul ............................................ 24
Lim, James ............................................... 47
Lin, Hsin-Yu ............................................... 420
Lin, Jia-Ming ............................................... 264
Lin, Judy ...................................................... 479
Linoski, Jeremy A ......................................... 359, 451
Liska, Craig ............................................... 76
Little, Margaret .......................................... 104
Liu, Guowen .............................................. 30
Liu, Oscar .................................................. 259
Liu, Xiaohong ............................................ 302
Liu, Yanyan ................................................ 147
Lloyd, David .............................................. 478
Lo, Lili ......................................................... 478
LoBrutto, Rosario ......................................... 208, 214, 255
Lodder, Helen ............................................. 370, 371
Lohani, Sachin ............................................ 271
Loo, Lawrence Y .......................................... 327
Lu, Xiaoning ............................................. 329, 461
Lu, Xujin .................................................... 478
Lucas, Herve ............................................... 321
Lukin, Mikhail ............................................. 111
Luttafel, Robert D ......................................... 294
<table>
<thead>
<tr>
<th>Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lyons, Ben</td>
<td>436</td>
</tr>
<tr>
<td>Lyubarskaya, Yelena</td>
<td>458</td>
</tr>
<tr>
<td>M</td>
<td></td>
</tr>
<tr>
<td>Ma, Lifu</td>
<td>226</td>
</tr>
<tr>
<td>Ma, Shengli</td>
<td>159</td>
</tr>
<tr>
<td>MacLuckie, Bill</td>
<td>114, 374</td>
</tr>
<tr>
<td>Madden, Odile</td>
<td>253</td>
</tr>
<tr>
<td>Madden, Sean P</td>
<td>474</td>
</tr>
<tr>
<td>Mahadevan, Suseela</td>
<td>62</td>
</tr>
<tr>
<td>Mahmood, Nazia</td>
<td>242</td>
</tr>
<tr>
<td>Mahmoud, Samantha M.</td>
<td></td>
</tr>
<tr>
<td>Maier, Norbert M.</td>
<td>415</td>
</tr>
<tr>
<td>Majeski, Raymond</td>
<td>482</td>
</tr>
<tr>
<td>Majors, Ronald</td>
<td>246</td>
</tr>
<tr>
<td>Majumdar, Tapan</td>
<td>54</td>
</tr>
<tr>
<td>Makarov, Alexey</td>
<td>208, 214</td>
</tr>
<tr>
<td>Malepati, Chetan Kumar</td>
<td>460</td>
</tr>
<tr>
<td>Malsbury, Adriene</td>
<td>33</td>
</tr>
<tr>
<td>Mamedov, Sergey</td>
<td>41</td>
</tr>
<tr>
<td>Manmode, Rahul</td>
<td>460</td>
</tr>
<tr>
<td>Mann, Thierry D</td>
<td>412, 485</td>
</tr>
<tr>
<td>Marchione, Alexander A</td>
<td>301</td>
</tr>
<tr>
<td>Marconi, Emanuele</td>
<td>10</td>
</tr>
<tr>
<td>Margreth, Michael</td>
<td>361</td>
</tr>
<tr>
<td>Markovich, Robert</td>
<td>442</td>
</tr>
<tr>
<td>Marques, Rosemary</td>
<td>346</td>
</tr>
<tr>
<td>Marshall, Alan</td>
<td>144</td>
</tr>
<tr>
<td>Martin, John</td>
<td>350</td>
</tr>
<tr>
<td>Martinetto, Pauline</td>
<td>106</td>
</tr>
<tr>
<td>Martins, Ana</td>
<td>400</td>
</tr>
<tr>
<td>Martos, Perry A</td>
<td>277</td>
</tr>
<tr>
<td>Masiuk, Tina</td>
<td>259</td>
</tr>
<tr>
<td>Mass, Jeffrey</td>
<td>102</td>
</tr>
<tr>
<td>Mass, Jennifer L</td>
<td>104</td>
</tr>
<tr>
<td>Matas Arroyo, Antonio J</td>
<td>304</td>
</tr>
<tr>
<td>Mathur, Arvind</td>
<td>204</td>
</tr>
<tr>
<td>Matousek, Pavel</td>
<td>168</td>
</tr>
<tr>
<td>Matson, Sandra</td>
<td>302</td>
</tr>
<tr>
<td>Matys, Katie</td>
<td>24</td>
</tr>
<tr>
<td>Maze, Jeronimo</td>
<td>111</td>
</tr>
<tr>
<td>McCaffrey, John</td>
<td>372</td>
</tr>
<tr>
<td>McCarty, Greg W</td>
<td>291</td>
</tr>
<tr>
<td>McCarty, Gregory W</td>
<td>318</td>
</tr>
<tr>
<td>McComb, Mark E</td>
<td>147</td>
</tr>
<tr>
<td>McCurry, James D</td>
<td>132</td>
</tr>
<tr>
<td>McElvain, James S</td>
<td>367</td>
</tr>
<tr>
<td>McFarlane, Gordon</td>
<td>181</td>
</tr>
<tr>
<td>McGachy, Neil</td>
<td>416</td>
</tr>
<tr>
<td>McGeorge, Gary</td>
<td>31, 168</td>
</tr>
<tr>
<td>McGinley, Michael D</td>
<td>413, 462</td>
</tr>
<tr>
<td>McGlinchey, Chris</td>
<td>400</td>
</tr>
<tr>
<td>McKellop, Keith B</td>
<td>96</td>
</tr>
<tr>
<td>McNally, Mary Ellen</td>
<td>377</td>
</tr>
<tr>
<td>McNeff, Clayton V</td>
<td>223</td>
</tr>
<tr>
<td>McNeish, Christopher</td>
<td>136</td>
</tr>
<tr>
<td>Medlin, Stephen</td>
<td>489</td>
</tr>
<tr>
<td>Meece, Doug</td>
<td>193</td>
</tr>
<tr>
<td>Mehta, Apurva</td>
<td>105</td>
</tr>
<tr>
<td>Men, Bin 180</td>
<td></td>
</tr>
<tr>
<td>Meriles, Carlos</td>
<td>111</td>
</tr>
<tr>
<td>Merlin, Mark</td>
<td>431</td>
</tr>
<tr>
<td>Messier, Paul</td>
<td>400</td>
</tr>
<tr>
<td>Miao, Zhixin</td>
<td>274</td>
</tr>
<tr>
<td>Michel, Anna P.M.</td>
<td>315, 316</td>
</tr>
<tr>
<td>Michel, Timothy J</td>
<td>446</td>
</tr>
<tr>
<td>Miller, Joel B</td>
<td>3</td>
</tr>
<tr>
<td>Millette, James</td>
<td>393</td>
</tr>
<tr>
<td>Milosevic, Milan</td>
<td>37</td>
</tr>
<tr>
<td>Milosevic, Violet</td>
<td>37</td>
</tr>
<tr>
<td>Mink, Lawrence P</td>
<td>192</td>
</tr>
<tr>
<td>Mitra, Somenath</td>
<td>63</td>
</tr>
<tr>
<td>Mitterbauer, Rudolf</td>
<td>98</td>
</tr>
<tr>
<td>Mizaikoff, Boris</td>
<td>297</td>
</tr>
<tr>
<td>Moment, Aaron J</td>
<td>124</td>
</tr>
<tr>
<td>Monico, Letizia</td>
<td>9</td>
</tr>
<tr>
<td>Moody, Robert T</td>
<td>219, 233</td>
</tr>
<tr>
<td>Moore, Amber</td>
<td>227</td>
</tr>
<tr>
<td>Moore, Douglas B</td>
<td>126, 206</td>
</tr>
<tr>
<td>Morales, Krystal</td>
<td>110</td>
</tr>
<tr>
<td>Morris, Robert E</td>
<td>452</td>
</tr>
<tr>
<td>Morrison, Damian</td>
<td>52, 203, 330</td>
</tr>
<tr>
<td>Mossoba, Magdi</td>
<td>80, 81</td>
</tr>
<tr>
<td>Mostafa, Ahmed</td>
<td>136</td>
</tr>
<tr>
<td>Mowry, Curtis D</td>
<td>455</td>
</tr>
<tr>
<td>Muddiman, David</td>
<td>145</td>
</tr>
<tr>
<td>Mueller-Weinitschke, Carola</td>
<td>7</td>
</tr>
<tr>
<td>Muller, James E</td>
<td>474</td>
</tr>
<tr>
<td>Mulvihill, Mark J</td>
<td>226</td>
</tr>
<tr>
<td>Murphy, Brett J</td>
<td>65, 445</td>
</tr>
<tr>
<td>Murphy, Robert C</td>
<td>100</td>
</tr>
<tr>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Nabi, Syed Ashfaq</td>
<td>331</td>
</tr>
<tr>
<td>Natishan, Theresa K</td>
<td>441</td>
</tr>
<tr>
<td>Neely, Matthew W</td>
<td>417</td>
</tr>
<tr>
<td>Negron, Nora</td>
<td>363</td>
</tr>
<tr>
<td>Nelson, Lisa</td>
<td>401</td>
</tr>
<tr>
<td>Newbury, Dale E</td>
<td>467</td>
</tr>
<tr>
<td>Newby, Josh J</td>
<td>419</td>
</tr>
<tr>
<td>Neyer, David</td>
<td>18, 44</td>
</tr>
<tr>
<td>Ni, Chaoying</td>
<td>164</td>
</tr>
<tr>
<td>Ni, Wangdong</td>
<td>293</td>
</tr>
<tr>
<td>Ni, Yizeng</td>
<td>175</td>
</tr>
<tr>
<td>Noda, Isao</td>
<td>35, 166</td>
</tr>
<tr>
<td>Noll, Robert J</td>
<td>102</td>
</tr>
<tr>
<td>Norris, Karl</td>
<td>290</td>
</tr>
<tr>
<td>Nortje, Johan</td>
<td>71</td>
</tr>
<tr>
<td>Norwood, Daniel L</td>
<td>428</td>
</tr>
<tr>
<td>Nouri, Paradise</td>
<td>54</td>
</tr>
<tr>
<td>Nowlan, Daniel</td>
<td>223</td>
</tr>
<tr>
<td>Nuyts, Gert</td>
<td>9</td>
</tr>
</tbody>
</table>
Oakum, Craig D........................................ 47
Obenauf, Ralph H...................................... 300
O’Connor, Paul ........................................ 468
Odegaard, Kalli J........................................... 19
O’Donnell, J. Kevin ..................................... 222
Ogdin, Phillip B........................................... 221
O’Hagan, Patrick ......................................... 337
Ojinnaka, Eleanor ........................................ 298
Oktawiec, Julia ............................................ 304
Oldridge, T. Nathan .................................... 136
Olsofsky, Angela M. .................................... 367
Opila, Robert ............................................... 267
Opio, Alex .................................................... 258
Oshokoya, Olayinka ..................................... 295
Ouyang, Zheng ........................................... 102
Ozer, Canan ................................................. 275

Pace, Gregory V........................................... 285
Palermo, Ryanne N....................................... 173
Pan, Mary ..................................................... 481
Pan, Shemin ................................................. 405
Panic, Ognjen .............................................. 136
Park, Melvin A............................................... 244
Parnas, Richard S......................................... 69
Patel, Bhavesh H......................................... 207, 356
Patel, M. B...................................................... 334
Patel, Mohit P............................................... 340
Patient, Michael ........................................... 39
Patterson, John ............................................. 237
Paul, Kotula G.............................................. 455
Paul, Philipp H............................................... 18
Pawliszyn, Janusz ......................................... 444
Pennington, Justin ........................................ 259
Pennington, Rachel L..................................... 239
Pennino, Scott .............................................. 96, 428
Peratis, Pranathi ............................................ 195
Perkins, Christopher ...................................... 69, 70
Perine, Kathryn ........................................... 264
Perry, Dale L.................................................. 390
Peru, Debbie A............................................... 384
Petraco, Nicholas D........................................ 242
Pfannkoch, Edward A..................................... 376
Phenix, Alan ................................................. 254
Phifer, Daniel ............................................... 427
Phomsopha, Rathvisa ..................................... 347
Pickett, Glenn T............................................. 68
Pietrantonio, Tony ........................................... 287
Pilo, Alice...................................................... 244
Pirzada, Zainab .......................... 411, 484
Plante, Marc ................................. 56, 97, 210, 349, 352
Pohl, Chris .................................................... 325
Polenova, Tatiana ......................................... 5
Porcher, Florence ......................................... 106
Porter III, George E....................................... 361, 364
Pothineni, Sai ............................................... 443
Potvin, Steeve ............................................. 375
Prater, Craig ................................................ 129
Pratt, Edwin ................................................ 411
Preiswerk, Thomas ....................................... 49
Preston, Kate ............................................... 307
Provatas, Anthony A...................................... 69, 70
Przybyciel, Matthew..................................... 486
Purcell, Dale K.............................................. 396
Pyron, Lindsey .......................................... 90, 92, 93, 193
Qin, Cindy ................................................. 372
Qiu, Feng..................................................... 174
Qiu, Fenghe ................................................. 428
Rafferty, Jake L.. ............................................ 156
Raghavan, Dharmanaraj.............................. 314
Ragunath, Smruti ......................................... 448
Rahman, Anis .............................................. 459
Rahman, Anik K........................................... 459
Ramanathan, Dil .......................................... 276
Ramasamy, Umasankar ............................... 62, 490
Ramer, Evan ................................................. 121
Rao, Priyanka.................................................. 479
Rasmussen, Morten A................................. 380
Ratanathanawongs Williams, S. Kim ............... 130
Raynie, Douglas ........................................... 19
Rechteiner, Carl E.......................................... 176
Reddy, Rohith K............................................ 475
Redfern, Del ................................................... 463
Reeves III, James B....................................... 292
Reeves, James ............................................ 318
Reffner, John A............................................. 262
Reffner, John R............................................... 423
Rego, Michael J............................................ 486
Reilly, Michael ........................................... 174, 302, 303
Reimer, Jeffrey A.......................................... 2
Reiner, George ............................................ 283
Reishig, Peter ................................................ 9
Rellar, Tammy............................................... 357
Rempel, Don................................................... 99
Ren, Ruiyi ..................................................... 147
Reynolds, Eugene R................................. 47, 224
Rhyne, Paul ................................................... 25
Rice, David .................................................. 151
Rich, Dan C.................................................... 299
Richardson, Emma ....................................... 254
Richmond, John .......................................... 489
Richter, Bruce E.......................................... 65, 118, 445
Ridgeway, Jr., Mark E................................. 244
Riley, Patrick C............................................. 294
Rintoul, Sandra ............................................ 38
Rivenc, Rachel ............................................ 250, 254
<table>
<thead>
<tr>
<th>Name</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sacks, Gavin</td>
<td>191</td>
</tr>
<tr>
<td>Sadeghi, Behnam</td>
<td>107</td>
</tr>
<tr>
<td>Sadik, Ommowunmi</td>
<td>317</td>
</tr>
<tr>
<td>Sae Khow, Ornthida</td>
<td>63</td>
</tr>
<tr>
<td>Saini, Charanjit</td>
<td>325</td>
</tr>
<tr>
<td>Sakkas, Denny</td>
<td>472</td>
</tr>
<tr>
<td>Samulski, Edward T.</td>
<td>1</td>
</tr>
<tr>
<td>Sanchez, A. Carl</td>
<td>327</td>
</tr>
<tr>
<td>Sanchez del Rio, Manolo</td>
<td>106</td>
</tr>
<tr>
<td>Santasania, Carmen</td>
<td>140, 329</td>
</tr>
<tr>
<td>Saraceno, Reginaldo</td>
<td>372</td>
</tr>
<tr>
<td>Sarpal, A. S.</td>
<td>334</td>
</tr>
<tr>
<td>Sasaki, Tania</td>
<td>305</td>
</tr>
<tr>
<td>Sato, Takashi</td>
<td>231, 232</td>
</tr>
<tr>
<td>Sauer, Karen L.</td>
<td>3</td>
</tr>
<tr>
<td>Sawyer, Geoff</td>
<td>369</td>
</tr>
<tr>
<td>Scandone, Marie</td>
<td>86</td>
</tr>
<tr>
<td>Scaringe, Raymond P.</td>
<td>488</td>
</tr>
<tr>
<td>Schafer, Wes</td>
<td>411, 484</td>
</tr>
<tr>
<td>Schenikman, John B.</td>
<td>405</td>
</tr>
<tr>
<td>Schiering, David</td>
<td>434</td>
</tr>
<tr>
<td>Schilling, Michael</td>
<td>254</td>
</tr>
<tr>
<td>Schlake, Rolf</td>
<td>20</td>
</tr>
<tr>
<td>Schlam, Roxana F.</td>
<td>488</td>
</tr>
<tr>
<td>Schmidt, Dean</td>
<td>373</td>
</tr>
<tr>
<td>Schmidt, Michelle</td>
<td>261</td>
</tr>
<tr>
<td>Schnepp, Suzanne</td>
<td>108</td>
</tr>
<tr>
<td>Schreiber, Andre</td>
<td>305</td>
</tr>
<tr>
<td>Schreyer, Suzanne</td>
<td>169</td>
</tr>
<tr>
<td>Schulmerich, Matthew</td>
<td>269</td>
</tr>
<tr>
<td>Schulte, Franziska</td>
<td>399</td>
</tr>
<tr>
<td>Schumacher, Rainer</td>
<td>98</td>
</tr>
<tr>
<td>Schure, Mark</td>
<td>156</td>
</tr>
<tr>
<td>Schuster, Stephanie A.</td>
<td>57, 225</td>
</tr>
<tr>
<td>Scott, Greg</td>
<td>462</td>
</tr>
<tr>
<td>Sears, Doug</td>
<td>279</td>
</tr>
<tr>
<td>Seeley, Craig</td>
<td>279</td>
</tr>
<tr>
<td>Seeley, John V.</td>
<td>132</td>
</tr>
<tr>
<td>Seeley, Stacy K.</td>
<td>132</td>
</tr>
<tr>
<td>Segel, Katherine</td>
<td>397</td>
</tr>
<tr>
<td>Senanayake, Chris</td>
<td>159</td>
</tr>
<tr>
<td>Senarat-Yapa, Muditha D.</td>
<td>252</td>
</tr>
<tr>
<td>Sengupta, Atanu</td>
<td>309</td>
</tr>
<tr>
<td>Severdina, Anthony</td>
<td>85</td>
</tr>
<tr>
<td>Seyfarth, Alexander</td>
<td>237</td>
</tr>
<tr>
<td>Sfeir, Matthew</td>
<td>241</td>
</tr>
<tr>
<td>Shah, Pankaj</td>
<td>470</td>
</tr>
<tr>
<td>Shahadat, Mohammad</td>
<td>331</td>
</tr>
<tr>
<td>Shams, Mehrdad</td>
<td>98</td>
</tr>
<tr>
<td>Sharon, Laura</td>
<td>358</td>
</tr>
<tr>
<td>Shashoua, Yvonne R.</td>
<td>397</td>
</tr>
<tr>
<td>Shaver, Jeremy M.</td>
<td>380</td>
</tr>
<tr>
<td>Shearow, Anne</td>
<td>73, 197, 198</td>
</tr>
<tr>
<td>Sheehan, Terry</td>
<td>16</td>
</tr>
<tr>
<td>Shelley, Paul H.</td>
<td>435</td>
</tr>
<tr>
<td>Shen, Sherry</td>
<td>159</td>
</tr>
<tr>
<td>Shen, Yan</td>
<td>456</td>
</tr>
<tr>
<td>Shende, Chetan</td>
<td>309</td>
</tr>
<tr>
<td>Sheriff, Jeff</td>
<td>93, 193</td>
</tr>
<tr>
<td>Shi, Ping</td>
<td>420</td>
</tr>
<tr>
<td>Shi, Yueer</td>
<td>479</td>
</tr>
<tr>
<td>Shi, Zhenqi</td>
<td>123, 450</td>
</tr>
<tr>
<td>Shia, Jeremy C.</td>
<td>350</td>
</tr>
<tr>
<td>Shirey, Robert E.</td>
<td>444</td>
</tr>
<tr>
<td>Shoji, Noriko</td>
<td>231, 232</td>
</tr>
<tr>
<td>Short, Steven M.</td>
<td>119, 173</td>
</tr>
<tr>
<td>Shoung, Jyh-Ming</td>
<td>456</td>
</tr>
<tr>
<td>Shui, Yue-Zhong</td>
<td>303</td>
</tr>
<tr>
<td>Sidsky, Leonard</td>
<td>66, 175, 178, 444</td>
</tr>
<tr>
<td>Siegel, Neal</td>
<td>476</td>
</tr>
<tr>
<td>Siererth, Karl D.</td>
<td>239</td>
</tr>
<tr>
<td>Sieppmann, J.I.</td>
<td>156</td>
</tr>
<tr>
<td>Sigman, Michael</td>
<td>263</td>
</tr>
<tr>
<td>Sillick, Matt</td>
<td>491</td>
</tr>
<tr>
<td>Simms, Christopher M.</td>
<td>294</td>
</tr>
<tr>
<td>Simon, Richard</td>
<td>333</td>
</tr>
<tr>
<td>Simpson, John V.</td>
<td>295</td>
</tr>
<tr>
<td>Singh, Bharat</td>
<td>468</td>
</tr>
<tr>
<td>Sirota, Eric</td>
<td>124</td>
</tr>
<tr>
<td>Sithersingh, Michael</td>
<td>194</td>
</tr>
<tr>
<td>Sivakumar, Vanaja</td>
<td>300</td>
</tr>
<tr>
<td>Skinner, Martha</td>
<td>147</td>
</tr>
<tr>
<td>Name</td>
<td>Page(s)</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Slaton, Garrett</td>
<td>333</td>
</tr>
<tr>
<td>Slough, Carlton G.</td>
<td>131</td>
</tr>
<tr>
<td>Smilde, Age K.</td>
<td>378</td>
</tr>
<tr>
<td>Smith, James A.</td>
<td>315</td>
</tr>
<tr>
<td>Smith, Kelsey M.</td>
<td>190, 243</td>
</tr>
<tr>
<td>Smith, Richard D.</td>
<td>149</td>
</tr>
<tr>
<td>Smith, Wayne</td>
<td>39, 454</td>
</tr>
<tr>
<td>Smith, Wendy L.</td>
<td>14</td>
</tr>
<tr>
<td>Snow, Nicholas H.</td>
<td>126, 194, 306, 308, 429</td>
</tr>
<tr>
<td>Socia, Adam</td>
<td>211</td>
</tr>
<tr>
<td>Sodini, Nicola</td>
<td>10</td>
</tr>
<tr>
<td>Solebello, Louis</td>
<td>76, 77</td>
</tr>
<tr>
<td>Sowa, Jr., John R.</td>
<td>298, 480</td>
</tr>
<tr>
<td>Spence, Megan</td>
<td>113</td>
</tr>
<tr>
<td>Spirig, John V.</td>
<td>335</td>
</tr>
<tr>
<td>Sprenkle, Trent</td>
<td>67, 75, 94, 333</td>
</tr>
<tr>
<td>Stanley, Bruce A.</td>
<td>459</td>
</tr>
<tr>
<td>Stacpinkskaite, Sniguoule</td>
<td>70</td>
</tr>
<tr>
<td>Stark, Ruth E.</td>
<td>304</td>
</tr>
<tr>
<td>Staskiewicz, Steven</td>
<td>346</td>
</tr>
<tr>
<td>Stein, Daniel T.</td>
<td>215, 240, 326</td>
</tr>
<tr>
<td>Steinbeiser, Melissa</td>
<td>257</td>
</tr>
<tr>
<td>Stenerson, Katherine</td>
<td>175, 444</td>
</tr>
<tr>
<td>Stevens, Douglas M.</td>
<td>278</td>
</tr>
<tr>
<td>Stevens, Tim</td>
<td>123</td>
</tr>
<tr>
<td>Stewart, Mikaela</td>
<td>110</td>
</tr>
<tr>
<td>Stoner, Kimberly A.</td>
<td>187</td>
</tr>
<tr>
<td>Storton, Mark L.</td>
<td>141</td>
</tr>
<tr>
<td>Strachan, David J.</td>
<td>131, 273</td>
</tr>
<tr>
<td>Striegel, Andre</td>
<td>128</td>
</tr>
<tr>
<td>Strobel, Pierre</td>
<td>106</td>
</tr>
<tr>
<td>Stuart, James D.</td>
<td>69, 70</td>
</tr>
<tr>
<td>Stuff, John R.</td>
<td>376</td>
</tr>
<tr>
<td>Su, Yuexin</td>
<td>53</td>
</tr>
<tr>
<td>Subramaniam, Hari</td>
<td>73, 199</td>
</tr>
<tr>
<td>Sum, Stephen</td>
<td>474</td>
</tr>
<tr>
<td>Sun, Dawn</td>
<td>204</td>
</tr>
<tr>
<td>Sun, Tong</td>
<td>468</td>
</tr>
<tr>
<td>Svoboda, Marie</td>
<td>105</td>
</tr>
<tr>
<td>Sybalsky, Julia</td>
<td>401</td>
</tr>
<tr>
<td>Szapacs, Matthew</td>
<td>23</td>
</tr>
<tr>
<td>Szostek, Bogdan</td>
<td>15</td>
</tr>
<tr>
<td>Tague, Jr., Thomas J.</td>
<td>473</td>
</tr>
<tr>
<td>Takahashi, Masatoshi</td>
<td>91, 209</td>
</tr>
<tr>
<td>Takai, Takatomo</td>
<td>231, 232</td>
</tr>
<tr>
<td>Takqi, Percy</td>
<td>298</td>
</tr>
<tr>
<td>Tang, Qinglin</td>
<td>442</td>
</tr>
<tr>
<td>Tattersall, Peter I.</td>
<td>439</td>
</tr>
<tr>
<td>Tavlarakis, Panagiotis</td>
<td>429</td>
</tr>
<tr>
<td>Taylor, Amanda</td>
<td>21</td>
</tr>
<tr>
<td>Tellers, David M.</td>
<td>124</td>
</tr>
<tr>
<td>Tepleyakov, Andrew V.</td>
<td>164, 264, 268, 391</td>
</tr>
<tr>
<td>Thaxton, Kurt</td>
<td>90, 92, 177</td>
</tr>
<tr>
<td>Theberge, Roger</td>
<td>147</td>
</tr>
<tr>
<td>Thompson, Hugh W.</td>
<td>260</td>
</tr>
<tr>
<td>Thompson, Jason A.</td>
<td>22</td>
</tr>
<tr>
<td>Tian, Fangyuan</td>
<td>164</td>
</tr>
<tr>
<td>Tian, Hung</td>
<td>173</td>
</tr>
<tr>
<td>Todd, Terry R.</td>
<td>88</td>
</tr>
<tr>
<td>Tomaino, Gary</td>
<td>76</td>
</tr>
<tr>
<td>Tomasella, Frank P.</td>
<td>355</td>
</tr>
<tr>
<td>Tomer, Seema</td>
<td>351</td>
</tr>
<tr>
<td>Tongesayi, Tsanangurayi</td>
<td>74</td>
</tr>
<tr>
<td>Toscano, Karen T.</td>
<td>351</td>
</tr>
<tr>
<td>Towey, Jinnie</td>
<td>82</td>
</tr>
<tr>
<td>Tran, Thuylin</td>
<td>327</td>
</tr>
<tr>
<td>Trentelman, Karen</td>
<td>105</td>
</tr>
<tr>
<td>Trimpin, Sarah</td>
<td>13</td>
</tr>
<tr>
<td>Trinkaus-Randall, Vickery</td>
<td>147</td>
</tr>
<tr>
<td>Tucker-Schwartz, Alexander K.</td>
<td>398</td>
</tr>
<tr>
<td>Tukkeeree, Suparerk</td>
<td>354</td>
</tr>
<tr>
<td>Twomey III, Joseph</td>
<td>412, 485</td>
</tr>
<tr>
<td>Tymiai, Adrienne</td>
<td>126, 174, 206</td>
</tr>
<tr>
<td>Uchiyama, Shigeisha</td>
<td>66</td>
</tr>
<tr>
<td>Udeochu, Uche</td>
<td>314</td>
</tr>
<tr>
<td>Unger, Larry</td>
<td>337</td>
</tr>
<tr>
<td>Usher, Karyn M.</td>
<td>190, 243</td>
</tr>
<tr>
<td>Vahey, Paul</td>
<td>435</td>
</tr>
<tr>
<td>Van Benthem, Mark H.</td>
<td>455</td>
</tr>
<tr>
<td>Van Damme, Freddy</td>
<td>468</td>
</tr>
<tr>
<td>van de Goor, Tom</td>
<td>45</td>
</tr>
<tr>
<td>Van Der Snickt, Geert</td>
<td>9</td>
</tr>
<tr>
<td>van Elslande, Elsa</td>
<td>106</td>
</tr>
<tr>
<td>van Oosten, Thea</td>
<td>251</td>
</tr>
<tr>
<td>van Soest, Remco</td>
<td>44</td>
</tr>
<tr>
<td>Van Tran, Kim</td>
<td>229</td>
</tr>
<tr>
<td>Varma, Deepti</td>
<td>212, 213, 457</td>
</tr>
<tr>
<td>Vegesna, Raju</td>
<td>208</td>
</tr>
<tr>
<td>Vestal, Marvin</td>
<td>101</td>
</tr>
<tr>
<td>Villasenor, Thomas</td>
<td>349</td>
</tr>
<tr>
<td>Vinci, Cody</td>
<td>227</td>
</tr>
<tr>
<td>Viswanathan, Seetha</td>
<td>185</td>
</tr>
<tr>
<td>Voilard-Bourgoin, Sandrine</td>
<td>147</td>
</tr>
<tr>
<td>Vollmerhaus, Pauline</td>
<td>305</td>
</tr>
<tr>
<td>Vreeland, Wyatt</td>
<td>46</td>
</tr>
<tr>
<td>Vuckovic, Dajana</td>
<td>444</td>
</tr>
<tr>
<td>Vujcic, Stefan</td>
<td>324</td>
</tr>
<tr>
<td>Vyas, Bharati</td>
<td>47</td>
</tr>
<tr>
<td>Vystavel, Tomas</td>
<td>427</td>
</tr>
<tr>
<td>Waeghe, Thomas J.</td>
<td>219, 225</td>
</tr>
<tr>
<td>Wagner, Brian M.</td>
<td>57</td>
</tr>
<tr>
<td>Wallace, Harvey</td>
<td>338</td>
</tr>
<tr>
<td>Walsh, Michael J.</td>
<td>475</td>
</tr>
<tr>
<td>Walter, Philippe</td>
<td>106</td>
</tr>
</tbody>
</table>
2010 EAS Final Program

Walter, Richard ........................................... 161
Walton, Marc ............................................. 105
Wan, Boyong ............................................... 31, 335
Wandrol, Petr ............................................... 427
Wang, George .............................................. 355
Wang, Lijuan .................................................. 27
Wang, Qinggang ............................................ 439, 487
Wang, Xiande (Andy) ...................................... 443
Wang, Yan ..................................................... 172
Wang, Yingzi .................................................. 302
Wang, Zhenyu ............................................... 259
Wang-Iverson, David ... 126, 174, 206
Waraska, John .............................................. 210
Warghe, Thomas J. ........................................... 233
Way, Wayne ................................................... 329
Wei, Bingchuan ............................................. 248
Wei, Guoxiu .................................................. 212, 213, 457
Weiland, Conan ............................................. 104
Weinberg, Sandy ............................................. 235
Weiss, Scott .................................................. 60
Welch, Christopher J. 117, 328, 411, 484
Werner, Greg J. ............................................. 435
Westerhuis, Johan ......................................... 381
Weston, Frank S. .......................................... 35, 166, 171
Weyer, Lois .................................................... 323
Wheat, Thomas E ........................................... 229
Wheaton, Jessalynn ........................................ 59
Whitehall, Ian N ............................................. 68
Whitley, Andrew ........................................... 41
Whitmore, Paul M .......................................... 252
Wijetunge, Prabodha ...................................... 47, 224
Wilks, Dylan .................................................. 38
Williams, Caitlin G ......................................... 437
Williams, Lee D ............................................ 370, 371
Williamsen, Eric J ......................................... 216, 217
Winchester, Michael R ..................................... 332
Wirth, Mary J ................................................... 248, 419
Wise, Barry M ................................................. 380
Witkowski, Mark R ......................................... 186
Wittstadt, Katrin ............................................ 7
Wong, Allen (Oi) ............................................ 25
Wood, Matthew ............................................. 260
Wu, Daoh-Rung ............................................. 204
Wu, Naijun ..................................................... 441
Wu, Shari ....................................................... 54
Wu, Shiyong ................................................... 274
X
Xu, Jane ....................................................... 350
Xu, Xiaobin ................................................... 147
Xu, Xuejun .................................................... 116
Xue, Yuzhu .................................................... 414
Y
Yan, Bingwen .................................................. 223
Yang, Chia-Yi ............................................... 367
FLOOR PLAN OF THE DOUBLETREE SOMERSET HOTEL

Hotel Floor Plan

Lobby Level

Executive Meeting Center
Second Level
2010 Eastern Analytical Symposium & Exposition
November 15 - 17, 2010
Garden State Exhibit Center
Somerset, New Jersey

EXPOSITION HOURS: 9 am - 4 pm Monday, Tuesday, Wednesday
# 2010 EAS Exhibitng Companies

**Last updated October 29, 2010**

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Company Name</th>
<th>Company Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Chemistry Development, Inc.</td>
<td>Advanced Instruments</td>
<td>Eurotek</td>
</tr>
<tr>
<td>Advantage Business Media</td>
<td>Advex</td>
<td>Evex</td>
</tr>
<tr>
<td>Agilent Technologies Inc.</td>
<td>Excellims</td>
<td>Food Quality</td>
</tr>
<tr>
<td>Ahura Scientific</td>
<td>Exel Laboratory Services</td>
<td>Fluid Imaging Technologies</td>
</tr>
<tr>
<td>Airgas East</td>
<td>Ezose Sciences</td>
<td>FOSS</td>
</tr>
<tr>
<td>Air Liquide America Specialty Gases LLC</td>
<td>Full Spectrum Analytics, Inc.</td>
<td>Gases and Instrumentation Magazine</td>
</tr>
<tr>
<td>Alfa Aesar, a Johnson Matthey Company</td>
<td>Genevac, An SP Brand</td>
<td>GenTech Scientific</td>
</tr>
<tr>
<td>American Chemical Society’s New York Section</td>
<td>Hanover Instruments</td>
<td>Gerstel, Inc.</td>
</tr>
<tr>
<td>American Laboratory Magazine (ISC)</td>
<td>HSci System Company</td>
<td>Glass-Col</td>
</tr>
<tr>
<td>American Pharmaceutical Review</td>
<td>Hitachi High Technologies America</td>
<td>Grace Davison Discovery Sciences</td>
</tr>
<tr>
<td>Analtech, Inc.</td>
<td>Honeywell Burdick &amp; Jackson</td>
<td>Greenwood Products</td>
</tr>
<tr>
<td>NanoSystems Instruments</td>
<td>Horizon Technology, Inc.</td>
<td>GTW-Welco, Inc.</td>
</tr>
<tr>
<td>Anton PAAR USA</td>
<td>IDBS</td>
<td>Hanna Instruments</td>
</tr>
<tr>
<td>Applied Research and Photonics</td>
<td>IE Scientific Services</td>
<td>Hi-Sci System Company</td>
</tr>
<tr>
<td>Aries Filterworks</td>
<td>Hitachi High Technologies America</td>
<td>Hi-Lab Services</td>
</tr>
<tr>
<td>Atago USA</td>
<td>Honeywell Burdick &amp; Jackson</td>
<td>Hi-Tech Scientific</td>
</tr>
<tr>
<td>Atlantic Analytical Laboratory</td>
<td>IO Scientific Services</td>
<td>Hitachi High Technologies America</td>
</tr>
<tr>
<td>Aurora SFC</td>
<td>Intertek</td>
<td>JEOL USA, Inc.</td>
</tr>
<tr>
<td>Axiom Analytical</td>
<td>Intertek</td>
<td>Joule Scientific</td>
</tr>
<tr>
<td>Baseline Service</td>
<td>Intertek</td>
<td>Kaiser Optical</td>
</tr>
<tr>
<td>Bay Spec</td>
<td>Intertek</td>
<td>Kitco Metals</td>
</tr>
<tr>
<td>Beckman Coulter</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Bel-Art Products</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Biotage</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>BioTools</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Brimrose Corporation</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Bruker</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Buchi</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Buck Scientific, Inc.</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>B&amp;W Tek</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>CAMAG Scientific, Inc.</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>CAMO Software</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Carl Zeiss Microimaging</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>CEM Corporation</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Cerrilliant Corporation</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Chata Biosystems</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Chemglass Life Sciences</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Chiral Technologies</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Chromatography Forum of the Delaware Valley</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>ChromSword Baltic, HPLC Specialists</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Claisse, Corporation Scientifique</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Coball Light Systems</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Coblenz Society</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Colognex LLC</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Compcat Analytical</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Cosa Instrument</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Decagon Devices</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Desagel Corporation</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Dionex Corporation</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Diset, Inc.</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Eigenvektor Research, Inc.</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Eksigent</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>ELGA Labwater</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>EMD Chemicals</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Enwave Optronics</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>ES Industries</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>EST Analytical</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>New York Microscopical Society</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>North Jersey Section - American Chemical Society</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>OI Analytical</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Oxford Instruments</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Parker Balston</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Peak Scientific</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>PerkinElmer</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Pharmaceutical Formulation and Quality</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Phenomenex, Inc.</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>pION, Inc.</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Pittsburgh Conference</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Polymer Standards Service</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>PPD</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Proton Energy Systems</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Quality Lab Accessories</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Quant Technologies</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Quantum Analytics</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Real-Time Analyzers</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Renishaw, Inc.</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Restek Corporation</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Retsch</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Rigaku Americas Corp.</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Robertson Microlit Laboratories, Inc.</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>RoMack</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>R/S Tech-Pro Solutions</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Rudolph Research Analytical</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Scientific Plastics Company</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Sepax Technologies</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>SGE Analytical</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Shimadzu Scientific Instruments, Inc.</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>SiliCycle</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Silverton Sciences</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Smithers Pharma</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Sonntek, Inc.</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Sotax Corporation</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Specialty Gas Report</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Spectra Analysis Instruments Inc.</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Spex SamplePrep</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Supelco/Sigma-Aldrich</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Surface Measurement Systems</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>TA Instruments</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Tasker &amp; Associates</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Taylor and Francis</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Teledyne Tekmar</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Thermo Scientific</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Tosoh Bioscience LLC</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Umetrics</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>USP (U.S. Pharmacopeia)</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Varian, Inc.</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Waters Corporation</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Wiley-Blackwell</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Wilmad-LabGlass</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Woodbridge Scientific</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>Wyatt Technology Corp.</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>YMC Co., Ltd.</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
<tr>
<td>ZirChrom Separations, Inc.</td>
<td>Intertek</td>
<td>Kinesis</td>
</tr>
</tbody>
</table>

---

**For more information contact Sheree Gold, EAS Exposition Director at:**
610-485-4633 (phone) • 610-485-9467 (fax) • easinfo@aol.com (e-mail)
The Eastern Analytical Symposium and Exposition is the second largest conference and exposition for laboratory science in the U.S. dedicated to the needs of analytical chemists and those in the allied sciences. We offer high quality cutting-edge technical sessions and state-of-the-art short courses, workshops and seminars. We invite you to be a part of the program by contributing a paper for oral or poster consideration. Please note that all abstracts must be submitted electronically via the EAS web site at www.EAS.org under the Symposium tab. The abstract submission deadline is April 15.

To submit a contributed paper for the 2011 EAS Technical Program, please submit abstracts through our web site at www.EAS.org/asubmit between March 1 and April 15, and follow the instructions for abstract submission. *Invited speakers must not submit abstracts to EAS until requested.*

Please carefully review the following information:

- All contributed abstracts must be submitted through our web site at www.EAS.org between March 1 and April 15, 2011. No faxed, e-mailed, or mailed abstracts will be accepted.
- **Please note that no one author may submit and present more than two posters.**
- All abstracts must be a maximum of 250 words or less.
- All abstracts will be acknowledged via e-mail.
- The title of the presentation and the list of authors that you submit are final, and may not be changed.
- The abstract that you submit will be considered to be your final abstract that will be printed in the abstract book for the 2011 Eastern Analytical Symposium.
- Presenting authors of contributed submissions will be notified in June 2011 of the status of the abstract and its session assignment.

**TOPICS AREAS**

| Bioanalysis | Laboratory Automation | Sample Preparation |
| Capillary Electrophoresis | Laboratory Management | Science Education |
| Chemometrics | LC/MS | Sensors |
| Chromatography | Mass Spectrometry | Separation Sciences |
| Conservation Science | Microchemistry | Size Exclusion Chromatography |
| Environmental Analysis | Microscopy | Solid State Analysis |
| Forensic Analysis | Near-Infrared (NIR) Spectroscopy | Space Analytics |
| Gas Chromatography | NMR Spectroscopy | Supercritical Fluid Chromatography |
| HPLC | Pharmaceutical Analysis | Surface Science |
| Immunochemistry | Process Analytical Science | Very High-Pressure LC/Ultra |
| Industrial Hygiene | Quality-by-Design | High-Pressure LC |
| Ion Chromatography | Quality/Regulatory/Compliance | Vibrational Spectroscopy |
| IR Spectroscopy | Raman Spectroscopy | |

**Contact information:**

- EAS Hotline: 732-449-2280
- EAS Faxline: 732-612-1123
- EAS E-mail: www.askeas@eas.org

www.EAS.org
What’s in your tablet?

Active 1 (µg)

Active 2 (mg)

Excipients

The FOSS XDS MasterLab™ is a Near-Infrared (NIR) Analyzer that provides you with rapid, accurate and non-destructive chemical analysis down to the microgram (µg) level in the laboratory and during the manufacturing process.

The XDS MasterLab offers pharmaceutical manufacturers a fast and reliable test method covering the full array of solid dosage forms: layered, coated or cored tablets, capsules, caplets, geltabs and gelcaps. The versatile sampling mechanism of the MasterLab offers an automated and unattended reflectance or transmission analysis of a tray of multiple tablets or vials.

FOSS is the world leading supplier of NIR products and services with over 18,000 successful installations. Our more than 40 years of NIR experience ensures that we will be there when you need us.

Please contact us for more information.

Dedicated Analytical Solutions
Tel: +1-301-680-9600
Email: info@foss-nirsystems.com

www.foss-nirsystems.com