There are numerous opportunities for sponsorship and co-sponsorship of technical sessions, awards, and other activities at the 2019 EAS. For more information, please contact the EAS Executive Secretary askeas@EAS.org

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The Governing Board of EAS would like to thank the following sponsors for their support.

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### SPONSORS OF THE 2018 EAS AWARDS PROGRAM

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<td>EAS Award for Outstanding Achievements in Vibrational Spectroscopy</td>
<td>American Microchemical Society, Thermo Fisher Scientific</td>
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<td>EAS Award for Outstanding Achievements in Separation Science</td>
<td>Merck &amp; Co., Inc., Kenilworth, NJ</td>
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**EAS Graduate & Undergraduate Student Awards Program**

Merck & Co., Inc., Kenilworth, NJ

### Support for the Technical Activities

- Bristol-Myers Squibb
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- New Jersey Association of Forensic Scientists
- New York Section of American Chemical Society
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Message from the President of the Governing Board

Mary Ellen McNally, EAS 2018 President

Welcome! On behalf of the EAS executive committee and governing board, we are delighted to see you here at EAS.

As I have listened to my colleagues both from work, from my chosen field, from EAS and even from my own experiences I have been struck by how apropos the theme *Analytical Solutions to the World’s Problems* applies. The 2016 President of EAS won’t be here after 20 years of perfect attendance because of work travel to Korea, the 2017 President of EAS is in Brussels as I compose this travelling on a plane returning from the Emerald Isle. No doubt you witness this interconnectivity of the world as well. We live in a global society and the work that is done world-wide helps design tomorrow’s experiments in each of our laboratories.

Distance between laboratories seems almost transparent as we share things virtually and globally. Communication is essential and the value of interaction immeasurable. The 2009 Nobel Prize in Chemistry winner, Thomas Steitz, commented on the value of that interaction. While Steitz was a postdoc at the Medical Research Council’s laboratory in Cambridge, UK, there was a canteen on the top floor of the lab where ideas were hashed out. In Professor Steitz’s Nobel autobiography, he wrote “Initially I wondered how anyone got any experiments done since they were spending so much time in the canteen, and then I realized that the many discussions reduced the number of unwise or unnecessary experiments that were done and enhanced the good ones. So, while attending EAS, listen, discuss, ask questions, we have three jam-packed days of topics and opportunities for you to do so. Here are some of the highlights of the many opportunities to participate this week.

- In the interest of the future of our world, we have started becoming a sustainable green conference with some specific initiatives.
  - Dr. John Warner, founder of the Warner Babcock Institute for Green Chemistry and our Keynote speaker will present on green chemistry technologies and lead off our efforts to be green and sustainable.
  - Our souvenir is a water bottle please fill it frequently at the water stations around the conference hall.
  - Our poster session is now electronic, please view the posters on the bridge during the selected presentation times.
  - Our program book has been reduced by over one third, printed on 100% recycled paper. Please download our app; see page 19 for more details.
  - As special thanks for thinking green, if you have travelled in a group or with just one other colleague or friend to EAS 2018, we will have a special gift for everyone in the car. Please go to the Souvenir Booth in Bridgewater with your travel companion to obtain.
  - Our plenary lecture will be given by the EAS Fields awardee, Professor Linda B. McGown of Rensselaer Polytechnic Institute. She is recognized for her solutions to the fields of separation science, the analysis of DNA sequences and recognizing the importance of aptamers as potential pharmaceutical substances.
  - On Tuesday, beat the traffic and get a great parking spot. Come listen to a breakfast lecture from Dr. Mark Schure on the current state of 2D liquid chromatography.
  - Our awardees will be presenting on their areas of excellence which embody the theme of solving the world’s problems through analysis. Award presentations occur each day in our technical program and we encourage you to take the opportunity to attend; all eight awardees’ bios are listed on pages 22-24 in this program.
  - Please check out our list of Short Course offerings, there is still time to sign up for a course while you are here. We have provided some new titles to pique your interest for either one or two days of continuing education.

These are just a few examples of the many ways to benefit from EAS. From education in analysis to application solutions, EAS has much to offer. Please take full advantage of the technical sessions, enjoy discussions with the vendors in the exhibition areas and learn about how analysis changes the world.

Thank you for coming to EAS 2018, enjoy the symposium!!

Mary Ellen McNally
2018 EAS President
Technical Fellow
FMC Agricultural Solutions
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For updates and discussions follow us on:
2018 EAS Conferences-in-Miniature

**Oral Technical Program Schedule:** Monday & Tuesday: 8:30am – 11:30am / 1:00pm – 4:00pm; Wednesday: 8:30am – 11:30am / 1:30pm – 4:10pm

**Poster Sessions Authors Available:** Monday & Tuesday: 11:30am-12:14pm / 12:15pm – 12:59pm; Wednesday 12:30pm – 1:14pm

**Short Course Schedule:** Sunday – Wednesday, 8:30am – 5:00pm

**Exposition Schedule:** Monday and Wednesday, 9:00am – 4:00pm; Tuesday, 9:00am – 5:30pm

---

### BIOANALYSIS

#### Technical Sessions
- Bioanalysis: Proteins, Peptides and Lipid Bilayers (11/12 PM)
- Innovative Approaches to Antibody Analysis (11/12 PM)
- American Microchemical Society Benedetti-Pichler Award, Honoring Ryan Bailey, University of Michigan (11/13 AM)
- Proteomics and Protein Bioanalysis (11/14 PM)

#### Short Course
- Intact and Top-Down Protein Characterization and Quantitation by Mass Spectrometry: Approaches for Pharmaceutical Drug Discovery, Development, and Bioanalysis (11/11)

### CHEMOMETRICS

#### Technical Session
- Better Raman Spectroscopy through Chemometrics (11/13 AM)

#### Short Courses
- Chemometrics Without Equations I & II (11/11-11/12)
- Introduction to Chemometrics Without Equations (11/11)
- Intermediate Chemometrics Without Equations (11/12)

### COMPLIANCE & REGULATORY

#### Technical Sessions
- Impact of New Regulatory Expectations to Drug Development in Pharmaceutical Industry (11/12 PM)
- Pharmaceutical Drug Product Quality (11/13 PM)
- Ensuring Quality of Pharmaceutical Products (11/14 PM)

#### Short Courses
- Keeping Your Analytical Procedures in Compliance with the FDA: Validation, Documentation, and Change Management (11/14)

### CONSERVATION SCIENCE

All sessions organized by the New York Conservation Foundation

#### Technical Sessions
- Surface Analyses for Cultural Heritage I (11/13 AM)
- Surface Analyses for Cultural Heritage II (11/13 PM)

### ENVIRONMENTAL & FOOD ANALYSIS

#### Technical Sessions
- EAS Young Investigator Award, Honoring Kerri Pratt, University of Michigan (11/12 PM)
- Analytical Solutions to the World’s Problems (11/13 PM)
- Averting Drinking Water Disasters with Analytical Chemistry (11/14 AM)
- Advances in Spectroscopy for Food Safety and Quality (11/14 AM)
- Novel Approaches to Analysis of Extreme Eco-Toxicological Contaminants (11/14 AM)
- Testing of Active Compounds and Contaminants in Food & Cannabis Products (11/14 PM)

### FORENSIC & MICROSCOPY ANALYSIS

#### Technical Sessions
- The Role of Forensic Analysis in Combating the Opioid Epidemic (11/12 AM)
- Advanced Solutions in the Analysis of Forensic Samples (11/12 PM)
- Research from our Emerging Forensic Scientists (11/13 AM)
- Forensic Microscopy “What is it? Who does it?” (11/13 PM)
- New York Microscopical Society Ernst Abbe Award; Honoring: Peter R. De Forest, retired, John Jay College of Criminal Justice (11/14 AM)
- Memorial Session Honoring Richard Saferstein (11/14 PM)

### GAS CHROMATOGRAPHY

#### Technical Sessions
- Recent Advances and Applications of Multidimensional Chromatography (11/13 AM)
- New Developments in GC Analysis Capabilities (11/13 AM)
- Modern Advances in Gas Chromatography (11/13 PM)

#### Short Courses
- Getting the most from GC and GC/MS (11/11)
- Practical Gas Chromatography (11/11-11/12)
- Troubleshooting Chromatographic Systems (11/13-11/14)

### GREEN CHEMISTRY

#### Keynote Lecture: Nov. 12, 4:15PM

**Green Chemistry: The Missing Elements**

John Warner, Warner Babcock Institute for Green Chemistry

#### Technical Sessions
- Finished Product Automation: Enabling the Products of the Future through Automation (11/12 AM)
- Recent Advances in Green Analytical Chemistry (11/12 PM)
- Analytical Solutions to the World’s Problems (11/13 PM)
- Modern Applications of Supercritical Fluid Chromatography (11/14 AM)

#### Short Course
- Supercritical Fluid Chromatography (SFC): A Powerful and Greener Tool for Analytical and Preparative Separations (11/13)

### LABORATORY & DATA ANALYSIS

#### Technical Sessions
- Managing Your Lab Resources, Internal and External (11/12 PM)
- Optimization of Laboratory Practices & Analytical Methods (11/14 PM)

#### Short Courses
- Taking Advantage of the Power of Excel (11/11)

### LIQUID CHROMATOGRAPHY

#### Breakfast Lecture: Nov. 13, 7:30AM

**Making the Case for Multidimensional Liquid Chromatography in the Search for Biomarkers**

Mark Schure, Kroungold Analytical, Inc.

#### Technical Sessions
- EAS Award for Outstanding Achievements in Separation Sciences, Honoring Christopher Pohl, Thermo Fisher Scientific (11/12 AM)
- The Current and Future Role of HILIC in the Separation World (11/13 PM)
- Modern Applications of Supercritical Fluid Chromatography (11/14 AM)
- Optimizing HPLC Analysis through Column Selection and Modelling (11/14 AM)

#### Short Courses
- Develop Robust HPLC Methods for Pharmaceutical Analyses (11/11)
- LC/MS: Theory, Instruments, and Applications (11/11-11/12)
- Modern HPLC/UHPLC for Practicing Scientists Parts 1 &/or Part 2: Fundamentals, Best Practices and Applications (11/11-11/12)
- Modern Size Exclusion Chromatography of Synthetic Polymers and Biopolymers (11/12)
- LC/MS Method Development for Small Molecule Pharmaceuticals (11/12-11/13)
## LIQUID CHROMATOGRAPHY (continued)

### Short Courses
- Supercritical Fluid Chromatography (SFC): A Powerful and Greener Tool for Analytical and Preparative Separations (11/13)
- How to Develop Validated HPLC Methods: Rational Design with Practical Statistics and Troubleshooting (11/13-11/14)
- Troubleshooting Chromatographic Systems (11/13-11/14)
- HPLC and UPLC Troubleshooting (11/14)
- How Liquid Chromatography Works: Separation Principles Explained in Chromatograms (11/14)

## MASS SPECTROMETRY

### Technical Sessions
- Unique Innovations with Mass Spectral Detection (11/12 AM)
- EAS Young Investigator Award, Honoring Kerri Pratt, University of Michigan (11/12 PM)
- EAS Award for Outstanding Achievements in Mass Spectrometry, Honoring Yinsheng Wang, University of CA-Riverside (11/13 AM)
- Advances in Mass Spectrometric Analysis (11/13 PM)

### Short Courses
- Interpretation of Mass Spectra with Practical Solutions to Problems (11/11)
- Getting the most from GC and GC/MS (11/11)
- Intact and Top-Down Protein Characterization and Quantitation by Mass Spectrometry: Approaches for Pharmaceutical Drug Discovery, Development, and Bioanalysis (11/11)
- LC/MS: Theory, Instruments, and Applications (11/11-11/12)
- LC/MS Method Development for Small Molecule Pharmaceuticals (11/12-11/13)

## NMR SPECTROSCOPY

### Technical Sessions
- Challenges Solved by NMR: Diverse Problems and Technologies (11/12 AM)
- New Tools in Solution NMR Spectroscopy (11/12 PM)
- Solid State NMR Studies of Disordered Systems (11/13 AM)
- EAS Award for Outstanding Achievements in Magnetic Resonance, Honoring Clare Grey, University of Cambridge (11/13 PM)

### Short Course
- Practical NMR Spectroscopy (11/14)

## PHARMACEUTICAL ANALYSIS (continued)

### Technical Sessions
- Stability Indicating Method Development and Forced Degradation Experimental Approaches (11/12 AM)
- The Role of Chirality in the Pharmaceutical Industry (11/12 PM)
- Impact of New Regulatory Expectations to Drug Development in Pharmaceutical Industry (11/13 PM)
- Analytical Solutions to Challenges in Impurity Testing (11/13 AM)
- PAT: Having Eyes in the Process (11/13 AM)
- Enabling Real Time Release Testing with PAT (11/13 PM)
- Pharmaceutical Drug Product Quality (11/13 PM)
- Challenges in Pharmaceutical Analysis: Formulations and Method Transfer (11/14 AM)
- Ensuring Quality of Pharmaceutical Products (11/14 PM)
- Proteomics and Protein Bioanalysis (11/14 PM)

### Short Courses
- Lifecycle Approach to Analytical Methods: Incorporating QbD Concepts into Method Development, Validation, Verification (11/11)
- Process Analytical Technology: Out of the lab and into the Line (11/11)
- Intact and Top-Down Protein Characterization and Quantitation by Mass Spectrometry: Approaches for Pharmaceutical Drug Discovery, Development, and Bioanalysis (11/11)
- Physical Characterization and Methods of Analysis of Pharmaceutical Solids: Essential Knowledge (11/11)
- Analytical Sampling and Sample Preparation (11/12)
- Modern Size Exclusion Chromatography of Synthetic Polymers and Biopolymers (11/12)
- Evaluation of Trace/Ultratrace Impurities in Pharmaceuticals (11/12)
- LC/MS Method Development for Small Molecule Pharmaceuticals (11/12-11/13)

## PROTEOMICS

### Technical Sessions
- EAS Award for Outstanding Achievements in Mass Spectrometry, Honoring Yinsheng Wang, University of CA-Riverside (11/13 AM)
- The Current and Future Role of HILIC in the Separation World (11/13 PM)
- Proteomics and Protein Bioanalysis (11/14 PM)

### Short Course
- Intact and Top-Down Protein Characterization and Quantitation by Mass Spectrometry: Approaches for Pharmaceutical Drug Discovery, Development, and Bioanalysis (11/11)

## SENSORS

### Technical Sessions
- American Microchemical Society Benedetti-Pichler Award, Honoring Ryan Bailey, University of Michigan (11/13 AM)
- Sensitive Electrochemical Methods from Sensors to Catalysis (11/14 AM)

## SPECTROSCOPY

### Technical Sessions
- EAS Award for Outstanding Achievements in Vibrational Spectroscopy, Honoring Stephen Cramer, University of California-Davis (11/12 AM)
- Analytical Techniques for Elemental Analysis of Solids (11/12 AM)
- 60th Anniversary of SAS: Advancing Spectroscopy from Foundation to Future (11/12 PM)
- New York/New Jersey Section of the Society for Applied Spectroscopy Gold Medal Award, Honoring Igor Lednev, University of Albany (11/13 AM)
- Better Raman Spectroscopy through Chemometrics (11/13 AM)
- Spectroscopy Hits the Clinic (11/13 PM)
- Nano IR Development (11/13 AM)
- EAS Award for Outstanding Achievements in the Fields of Analytical Chemistry, Honoring Linda McGown, Rensselaer Polytechnic Institute (11/14 AM)
- Raman Material Identification (11/14 AM)
- Advances in Spectroscopy for Food Safety and Quality (11/14 AM)
- Analytical Chemistry On the Go: Mobile Measurements (11/14 AM)
- Enhancement Strategies in Raman & Infrared Spectroscopy (11/14 PM)

### Short Courses
- Introduction to Vibrational Spectroscopy for Real-Time Analysis (11/11)
- Modern Portable Analytical Spectroscopy (11/13)
- Practical NMR Spectroscopy (11/14)

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**For Poster Sessions – see pages 6-18 for full listing of posters**
**Monday-Wednesday**
2018 Technical Program

**Monday Morning, November 12, 2018**

**EAS Award for Outstanding Achievements in Separation Science**  
*Sponsored by Thermo Fisher Scientific*  
Chair: Kannan Srinivasan, Thermo Fisher Scientific

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<tr>
<th>Time</th>
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<tr>
<td>8:30</td>
<td>Presentation of the EAS Award for Outstanding Achievements in Separation Science to Christopher Pohl, Thermo Fisher Scientific</td>
</tr>
<tr>
<td>8:35</td>
<td>1 Hyperbranched Anion-Exchange Phases in Ion Chromatography, Christopher Pohl, Thermo Fisher Scientific</td>
</tr>
<tr>
<td>9:10</td>
<td>2 High-Performance Anion Exchange Chromatography and Pulsed Electrochemical Detection: An Ideal Couple for Carbohydrate Analysis, William R. LaCourse, University of Maryland-Baltimore County</td>
</tr>
<tr>
<td>9:50</td>
<td>Break</td>
</tr>
<tr>
<td>10:10</td>
<td>3 Open Tubular Capillary Ion/Liquid Chromatography: The Challenges and the Rewards, Purnendu K Dasgupta, University of Texas-Arlington</td>
</tr>
<tr>
<td>10:50</td>
<td>4 Recent Advances in Suppressor Technology for Ion Chromatography, Kannan Srinivasan, Thermo Fisher Scientific</td>
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**New York/New Jersey Sections of the Society for Applied Spectroscopy Gold Medal Award**  
Chairs: Daniel Sanborn, tec5USA, Inc., Deborah Peru, DP Spectroscopy & Training LLC

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<tr>
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<td>Presentation of New York/New Jersey Sections of the Society for Applied Spectroscopy Gold Medal Award to Igor K. Ledney, University of Albany-SUNY</td>
</tr>
<tr>
<td>8:35</td>
<td>5 Raman Spectroscopy for Forensic Purposes and Medical Diagnostics, Igor K. Ledney, University of Albany-SUNY</td>
</tr>
<tr>
<td>9:10</td>
<td>6 T-Jump Resonance and Normal Raman Determination of Reaction Coordinate of Thermoresponsive Hydrogel Volume Phase Transition, Sanford A. Asher, Tsung-Yu Wu, Alyssa B. Zrimsek, Sergei V. Bykov, Ryan S. Jakubek, University of Pittsburgh</td>
</tr>
<tr>
<td>9:50</td>
<td>Break</td>
</tr>
<tr>
<td>10:10</td>
<td>7 Applications of Vibrational Optical Activity for the Elucidation of Molecular Stereochemistry, Laurence A. Nafie, Syracuse University</td>
</tr>
<tr>
<td>10:50</td>
<td>8 Forensic Science R&amp;D Programs at the National Institute of Justice: Opportunities for Novel Spectroscopic and Analytical Techniques Applied to Forensic Problems, Gregory Dutton, National Institute of Justice</td>
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**The Role of Forensic Analysis in Combating the Opioid Epidemic**, sponsored by *New Jersey Association of Forensic Scientists*  
Chair: Monica Joshi, West Chester University of PA

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<tr>
<td>8:30</td>
<td>9 Opioid Analytical Challenges Facing the Drug Enforcement Administration, Mark Filandro, United States Drug Enforcement Administration</td>
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<tr>
<td>9:10</td>
<td>10 Challenges and Insights in LC-MS-MS and LC-TOF-MS Analysis of Isobaric Compounds in the Opioid Class, Michael E. Lamb, Donna M. Papsun, Barry K. Logan, NMS Labs</td>
</tr>
<tr>
<td>9:50</td>
<td>Break</td>
</tr>
<tr>
<td>10:10</td>
<td>11 Analysis of Novel Opioids using a Direct Analysis in Real Time (DART) Equipped Mass Spectrometer, Brian Musselman, Frederick Li, IonSense, Paul Kennedy, Chris Snyder, MishkaRepaska, Cayman Chemical, Stephen Shrader, Shrader Software Solutions</td>
</tr>
<tr>
<td>10:50</td>
<td>12 The Growing Phenomenon of the Epidemic of Synthetic Opioids and Forensic Science: Impact and Response, Erin Worrell, Cuyahoga County Medical Examiner</td>
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**Stability Indicating Method Development and Forced Degradation Experimental Approaches**  
Chair: David Schenk, Merck & Co.

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<th>Time</th>
<th>Session</th>
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<tr>
<td>9:10</td>
<td>14 Accelerated Degradation of Pharmaceuticals in Leidenfrost Droplets and its Potential, Yangjie Li, R. Graham Cooks, Purdue University, Yong Liu, Hong Gao, Roy Helmy, W. Peter Wueffling, Merck &amp; Co., Christopher J. Welch, Welch Innovation, LLC</td>
</tr>
<tr>
<td>9:50</td>
<td>Break</td>
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<tr>
<td>10:10</td>
<td>15 Method Specificity: Forced Degradation Study Justifications from an Established Products Perspective, Neal Adams, Pfizer</td>
</tr>
<tr>
<td>10:50</td>
<td>16 Perspectives on ANVISA’s RDC 53 Forced Degradation Requirements, Leonardo Allain, Merck &amp; Co.</td>
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</table>

**Challenges Solved by NMR: Diverse Problems and Technologies**  
Chairs: Yongchao Su, Xingyu Lu, Merck & Co.

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<th>Time</th>
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<tr>
<td>8:30</td>
<td>17 Correlating Structure and Mobility Information to Functional Properties of Pharmaceutical Formulations, Eric J. Munson, Purdue University</td>
</tr>
<tr>
<td>8:50</td>
<td>18 Boron-10 Solid-State NMR: Developments of Techniques for Rapid Spectral Acquisitions and Applications to Disordered Solids, Robert W. Schurko, Lucas D.D. Foster, Adam R. Altenhof, Stanislav L. Veinberg, University of Windsor</td>
</tr>
<tr>
<td>9:10</td>
<td>19 Characterization of Formulated Pharmaceuticals Using Fast MAS 1H Solid-State NMR Spectroscopy, David A. Hirsh, Anuradha V. Wjesekara, Scott L. Carnahan, Aaron J. Rossini, Iowa State University, Joseph W. Lubach, Karthik Nagapudi, Genentech</td>
</tr>
</tbody>
</table>
| 9:30  | 20 High-Resolution Proton-Detected and Multidimensional Solid-State NMR of Pharmaceuticals Utilizing Ultrafast Magic Angle Spinning of 60-111 kHz, Xingyu Lu, Karen C. Thompson, Haichen Nie,  

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This program is printed on 100% recycled paper
Unique Innovations with Mass Spectral Detection
Chair: Mary Lynn Grayeski, Marywood University

- 8:30 33 Capture of Electrochemically-Generated Fleeting Carbazolium Radical Cations and Elucidation of Carbazole Dimerization Mechanism by Mass Spectrometry, Hao Chen, Ohio University
- 8:50 34 Identification of Ortho-Substituted Benzoic Acid/Ester Derivatives via the Gas-Phase Neighboring Group Participation Effect in (+)-ESI High Resolution Mass Spectrometry, Huaming Sheng, Merck
- 9:10 35 High-Throughput Analysis: Where Mass Spectrometry Fits, Jessica Lin, Colin Masui, Kelly Zhang, Genentech
- 9:30 36 Opportunities for Method Development by Using Various Mass Spectrometric Ionization Techniques, Norman H. Chiu, University of North Carolina-Greensboro
- 9:50 Break
- 10:10 37 High-Throughput Ion Mobility Mass Spectrometry Sequencing of Cyclic Peptides Mediated Through Oxazolidinone Ring Opening, Ryan D. Cohen, Merck & Co., Hader E. Elashal, Heidi E. Elashal, Seton Hall University, Monika Raj, Auburn University
- 10:30 38 Glass or Plastic? The Challenges and Solutions of Analyzing Mercury by ICP, James A. King Jr., Inorganic Ventures
- 11:10 40 Analysis of Vanilla Extract by the Molecular Ionization Desorption Analysis Source for Mass Spectrometry, Ciara N. Pitman, Joshua A. Wilhide, William R. LaCourse, University of Maryland-Baltimore County

Monday, E-Poster Session 1; 11:30AM – 12:15PM

41 Green Analytical Chemistry - with Enzymes, Ellen R. Campbell, Wilbur H. Campbell, NECi, Nicolas Plumere’, University of Bochum
42 Synthesis, Photocatalytic Properties and Langmuir-Blodgett Film Photoelectrochemical Behavior of CdS Nanoparticles with Hydrophilic or Hydrophobic Organic Shell, Mornoka Nagamine, Justyna Widera-Kalinowska, Adelphi University, Magdalena Osiol, Pawel Krysiński, University of Warsaw
43 Automated Recycling Chromatography, Fabrice G. Gritti, Waters Corporation
44 Modernization of USP Methods Using Ion Chromatography (IC) for Active Pharmaceutical Ingredient (API) Determination, Hua Yang, Jingli Hu, Jeff Rohrer, Thermo Fisher Scientific
46 Express Protein Digestion by Automated, Micro Reaction Cartridges, Anne Jurek, Peter Dawes, EST Analytical
Monday, E-Poster Session 2; 12:15PM – 1:00PM

47 Rapid Automated Sample Preparation for the Extraction of Semi-Volatile Organic Compounds from Soil, Alicia D. Stell, Candice A. Olsson, Brittany A. Leffler, CEM Corporation

48 Diving Deep – Continued Studies of the Longitudinal Diffusion Coefficient in Liquid Chromatography, Dwight Stoll, Devin Makey, Gustavus Adolphus College, Huiling Song, Deirdre Cabooter, University of Leuven, Monika Dittmann, Agilent Technologies, Gert Desmet, Vrije University of Brussel

49 A Diphenyl Bonded-Phase on Wide Pore Superficially Porous Particles for Efficient Separations of Proteins, Edward A. Faden, MAC-MOD Analytical, Stephanie Schuster, William Miles, Brian Wagner, Ben Libert, Barry Boyes, Advanced Materials Technology

50 Applications of Augmented Reality (AR) Technology in Scientific Education and Technical Learning, Helen Zhang, DISTAT Co.

51 Integrating Clinical Analytical Research Projects into Chemistry Curriculum, Yuegang Zuo, University of Massachusetts-Dartmouth

52 Mass Spectral Analysis of Fragrances, Anna Swyers, Shirley Fischer-Drowos, Widener University

53 Strategies to Evaluate and Monitor Forced Degradation Studies Using a Dual Detection (UV-MS) System, Paula Hong, Zhimin Li, Patricia R. McConville, Waters Corp.

54 Electrochemical-MS (EC-MS) Approach for Forced Degradation Studies, Nicholas Santiago, Antec Scientific

55 Detection of Neutral CO Lost during Ionic Dissociation Using Atmospheric Pressure Thermal Dissociation Mass Spectrometry (APTD-MS), Pengyi Zhao, Travis A. White, Ohio University, R. Graham Cooks, Purdue University, Qinhao Chen, Yong Liu, Merck &Co., Hao Chen, New Jersey Institute of Technology

56 Analysis of Food Samples Using Thin Film Solid Phase Microextraction (TF-SPME) and Thermal Desorption GCMS, Laurel A. Vernarelli, Jackie Whetcavage, John Stuff, GERSTEL, Inc.

57 Characterization of LC Packing Materials by NMR Solvent Relaxation at High Field, Xiangjin Song, Waters Corporation

58 Carryover Improvement Achieved Through Instrument Design Changes and Needle Wash Optimization for HPLC Systems, Amanda Dlugasch, Jennifer Simeone, Waters Corp

59 Fully Automated Determination of pH in Cell Culture Media Using Flow Cell Technology, Kerri-Ann Blake, Metromoh USA

60 Assessment of Deamidation and Aggregation of Peptide Variants, Eileen Zhao, Mohammad Al-Sayah, Genentech Inc.

61 Determination of Aminoglycoside Antibiotics by LC-PAD, Jingli Hu, Jeff Rohrer, Thermo Fisher Scientific

62 Triboluminescence (TL): Fast Detection of Crystallinity within Amorphous Solid Dispersions, Julie M. Novak, Siwei Zhang, Zhen Liu, Timothy Rhodes, Merck & Co., Casey J. Smith, Scott R. Griffin, Julia K. White, Garth J. Simpson, Purdue University

63 Automated Rapid Drug Extraction at Trace Levels from Serum and Blood Using a Novel Small Particle Micro-SPE Cartridge, Anne Jurek, Peter Dawes, EST Analytical

64 Analysis of Dibenzo[a,l]pyrene in Marine Sediment Samples via High-Performance Liquid Chromatography – Laser Excited Time Resolved Shpol’skii Spectroscopy, Ahmed Comas, Jennifer Ferrante, Anthony Santana, Andres D. Campiglia, University of Central Florida

65 The Hydrophobic Subtraction Model of Reversed-Phase Selectivity – Principles and the Public Column Database, Dwight Stoll, Tina Dahlseid, Gustavus Adolphus College

66 Investigating the Effects of Chromatographic Parameters on Column Equilibration in Isocratic and Gradient HILIC Separations, Alex Nasseh, Geoffrey M. Faden, Edward A. Faden, MAC-MOD Analytical, Alan McKeown, Hichrom Limited

67 Fast HPLC Separation of Triptans in Plasma on a ZirChrom-PBD Column, Julie A. Jenkins, ZirChrom Separations, Richard A. Henry, Independent Consultant

68 New Wide Pore Epoxy Activated Monolithic Silica: Attach any Ligand to Prepare Your Own Column, Egidijus Machtejevas, Benjamin Peters, MilliporeSigma

69 High-Performance Separations Using 100% Aqueous Mobile Phase Compatible Superficially Porous Particle Columns Coupled with Mass Spectrometry, Thomas M. Waeghe, MAC-MOD Analytical, Chuping Lu, Justin Godinho, Ben Libert, Stephanie Schuster, Barry Boyes, Advanced Materials Technology


71 Characterization of Anionic and Cationic Metabolites in a Single Embryonic Cell (Xenopus laevis) Using CE-ESI-MS, Erika P. Portero, Peter Nemes, University of Maryland

72 Mass Spectrometry Based Proteomics to Investigate and Characterize the Jumping Translocation Breakpoint (JTB) Protein Using Cancer Cell Lines, Madhuri Jayathirah, Devika Channaveerappa, Kangning Li, Costel C. Darie, Clarkson University

73 Investigation of the Molecular Changes in Rat Atria during Obstructive Sleep Apnea Using Mass Spectrometry Based Proteomics, Devika Channaveerappa, Costel C. Darie, Clarkson University, Jacob Lux, Meredith McLerrie, Brian K. Panama, Masonic Medical Research Laboratory

74 GC-MS-Based Untargeted Metabolomics Workflow for Biomarker Discovery in Crohn’s Disease, Xin Zheng, Suresh Seethapathy, Jason Cole, Thermo Fisher Scientific

75 Transfer and Scaling of a USP Assay for Quetiapine Fumarate across Liquid Chromatographic Systems, Amanda Dlugasch, Jennifer Simeone, Waters Corp

Monday Afternoon, November 12, 2018

EAS Young Investigator Award
Sponsored by The Dow Chemical Company
Chair: Kimberly Prather, University of California-San Diego

1:00 76 New Insights into Marine Aerosols by Mass Spectrometry, Kimberly Prather, University of California-San Diego

1:40 77 Nanoparticles in the Air We Breathe: Pristine or Polluted?, Murray Johnston, University of Delaware
Recent Advances in Green Analytical Chemistry
Chair: Joe P. Foley, Drexel University

1:00 80 Introduction to and Overview of Green Analytical Chemistry, Joe Foley, Drexel University
1:40 81 Recent Developments on Solid Phase Microextraction, a Green Sample Preparation Tool for On-Site, In-Vivo, and Complex Matrices Analysis, Nathaly Reyes-Garcés, Janusz Pawliszyn, University of Waterloo

2:20 Break

2:40 82 Greenness through Modernized Separation Methods: Introduction of the Analytical Method Greenness Score (AMGS) Calculator for Greener Methods, Michael B. Hicks, Lauren Weisell, Merck & Co., William Farrell, Christine Aurigemma, Pfizer, Laurent Lehman, Bristol-Myers Squibb, Kelly Nadeau, Agen, Heewon Lee, Boehringer-Ingleheim, Carol Moraff-Gingsburg, Novartis, Mingdong Wong, Gentech, Paul Ferguson, AstraZeneca


The Role of Chirality in the Pharmaceutical Industry
Chair: Nelu Grinberg, Grinberg Consulting

1:00 84 Ultra-Fast Chiral Separation for High-Throughput Enantiopurity Analysis, Gregory F. Pirrone, Erik L. Regalado, Alexey A. Makarov, Leo A. Joyce, Merck & Co., Christopher J. Welch, Welch Innovation, LLC, Daniel W Armstrong, Chandan L. Barhate, University of Texas-Arlington
1:40 85 Circular Dichroism Spectroscopy as a Tool to Solve Complex Stereochemical Problems in the Pharmaceutical Industry, Leo A. Joyce, Merck & Co.

2:20 Break

2:40 86 Insights on Chiral Recognition for Enantiomeric Separation on Teicoplanin Columns, Ling Wu, Nina Gonella, Heewon Lee, Boehringer Ingelheim Pharmaceuticals, Nelu Grinberg, Grinberg Consulting, Shengli Ma, Gentlech, Sherry Shen, United States Food & Drug Administration, David S. Bell, Restek Corporation

3:20 87 Mechanistic Aspects of Chiral Discrimination with Sulfated beta Cyclodextrin, Nelu Grinberg, Grinberg Consulting, Ling Wu, Nizar Haddad, Boehringer Ingelheim Pharmaceuticals

New Tools in Solution NMR Spectroscopy
Chairs: Alexander Marchione, Chemours Fluoroproducts Analytical, Gary Martin, Seton Hall University

1:00 88 Emerging Methods in 19F-NMR to Characterize Proteins and Small Molecules, Haribabu Arthanari, Harvard Medical School-DFCI
1:40 89 Nonuniform Sampling for Sensitivity Enhancement in Multidimensional NMR, Jeffrey C. Hoch, University of Connecticut Health Center

2:20 Break

2:40 90 Fast NMR Techniques for Structure Elucidation of Small Molecules, Eriks Kupce, Bruker BioSpin
3:20 91 Advanced NMR Techniques for Challenging Structural Assignment Problems, Gary Martin, Seton Hall University

Advanced Solutions in the Analysis of Forensic Samples
Chair: Pauline Leary

1:00 92 Forensic Application of Attenuated Total Reflection Fourier Transform-Infrared (ATR FT-IR) Spectroscopy for Bloodstain Analysis, Elvina M. Mistek, Igor K. Lednev, University at Albany-SUNY

2:00 95 Universal Detection of Body Fluid Traces In-Situ with Raman Hyperspectroscopy for Forensic Purposes, Marisja Fikiet, Gregory McLaughlin, Igor Lednev, University at Albany-SUNY, Masahiro Ando, Hiro-o Hamaguchi, Spectroscopic Science Laboratory

2:20 Break

2:40 96 Blood Alcohol and Inhalant Analysis by Gas Chromatography - Vacuum Ultraviolet Spectroscopy, James A Diekmann III, Jack Cochran, VUV Analytics
3:00 97 Solid Phase Microextraction-DART-MS Screening for Controlled Dangerous Substances in Complex Matrices, Eileen Eubank, Janelle Newman, Jeremy Zehr, Joseph Trimbol, MRIGlobal


3:40 99 Confirmatory Method Optimization for the Analysis of Thirty Fentanyl Analogues via Gas Chromatography-Mass Spectrometry, Delilah DeWilde, Thomas Brettlei, Thomas Pritchett, Cedar Crest College, Matthew Wood, Ocean County Sheriff's Department

This program is printed on 100% recycled paper
60th Anniversary of SAS: Advancing Spectroscopy from Foundation to Future, organized by NY/NJ SAS
Chair: John Wasylyk, Bristol-Myers Squibb

1:00 100 Another Diamond Anniversary - Diamond Optics for Infrared Spectroscopy Applications, David W. Schiering, Czitek, John A. Reffner, John Jay College of Criminal Justice

1:40 101 Fifty Years of NMR Spectroscopy and Forty Years of SAS, Cecil Dybowski, University of Delaware

2:20 Break

2:40 102 Applying Vibration Spectroscopy in Usual and Unusual Ways in the Pharmaceutical Sciences, John Wasylyk, Bristol-Myers Squibb

3:20 103 NYSAS Celebrates 60+ Years of Scientific Collaboration and Discusses the Impact of Chemometrics on the Evolution of Raman Instrumentation, Deborah Peru, DP Spectroscopy & Training, Howard Mark, Mark Electronics, Fran Adar, Horiba Scientific

Impact of New Regulatory Expectations to Drug Development in Pharmaceutical Industry
Chairs: Kim Huynh-Ba, Pharmalytik and Karen Lucas, J&J Janssen

1:00 104 The Evolving Global Regulatory Environment - Strategic Considerations, Kimberly Belsky, Mallinckrodt Pharmaceuticals

1:40 105 Stability Compliance for Combi-Products - A Medical Device Perspective, Laure Larkin, Ethicon, Inc.

2:20 Break

2:40 106 Regulatory Expectations in the GMP Pharmaceutical Laboratory, Gayle S. Lawson, United States Food & Drug Administration


Managing Your Lab Resources, Internal and External
Chairs: Dennis Swijter, ALMA

1:00 108 Perspectives in Managing Analytical Activities in an all Outsourced and Global Pharma Model, Shirley Rodriguez, Shire

1:40 109 Lessons Learned from Managing Outsourcing of Analytical Development and Testing, Qiaoching Li, Celgene Corp.

2:20 Break

2:40 110 Maximizing Effectiveness when Working with an External Contract Laboratory, Jonathan Chun, Alliance Technologies

3:20 111 The Simplest, Most Effective, and Least Expensive Lab Safety Program, James A. Kaufman, Laboratory Safety Institute

Bioanalysis: Proteins, Peptides and Lipid Bilayers
Chair: Nathan Wittenberg, Lehigh University

1:00 112 Kinetic-Equilibria Modeling Strategies for Lab-on-a-Molecule Probes, Fereshteh Emami, Southeastern Louisiana University

1:20 113 Immunoaffinity Capillary Electrophoresis for the Determination of Protein Biomarkers of Disease in Biological Fluids. Maximizing Benefits and Minimizing Harm, Norberto A. Guzman, Princeton Biochemicals

1:40 114 Optimizing HPLC Separation Performance for Peptides and Other Mid-Size Molecules, Richard A. Henry, Independent Consultant, Justin M. Godinho, Joseph J. DeStefano, Advanced Materials Technology

2:00 115 Effects of Photosensitized Lipid Oxidation on Supported Lipid Bilayer Formation and Structure, Nathan Wittenberg, Ashley Baxter, Michael Farley, Joseph Saba, Lehigh University

Innovative Approaches to Antibody Analysis
Chair: Nathan Wittenberg, Lehigh University

2:40 116 A Generic mAb Subunit LC-MS Assay for In-Vivo Drug-to-Antibody Ratio and ADC Concentration Determination in Pre-Clinical Studies, John F. Kellie, GlaxoSmithKline

3:00 117 Electro-Flow Asymmetric Field Flow Fractionation Characterization of the NIST Monoclonal Antibody Standard RM 8671, Robert Reed, Soheyl Tadjiki, Thorsten Klein, Postnova Analytics Inc.

3:20 118 Bead-Extraction and Heat-Dissociation (BEHD): A Novel Way to Overcome Drug and Matrix Interference for Small Biotherapeutic Modality such as Domain Antibody, Weifeng Xu, Michael Sank, Renuka Pillutla, Bristol-Myers Squibb

3:40 119 Multiplexed Residual Process Impurity Monitoring in Antibody–Drug Conjugates by Charged Aerosol Detection, Steven Chin, Tao Chen, Genentech

KEYNOTE LECTURE
Sponsored by Kuraray America
Monday, November 12, 4:15pm, #120
Green Chemistry: The Missing Elements
John Warner, Warner Babcock Institute for Green Chemistry
All registered Conference Attendees and Exhibitors are invited to attend. A reception will be held immediately following the lecture.

BREKFAST LECTURE
Sponsored by Shimadzu Scientific Instruments
Tuesday, November 13, 7:30am, #121
Making the Case for Multidimensional Liquid Chromatography in the Search for Biomarkers
Mark Schure, Kroungold Analytical, Inc
All registered Symposium Conference Exhibitors and Full-Time Student Conference Participants are invited to attend the Breakfast Lecture. A light breakfast will be provided.
EAS Award for Outstanding Achievements in Mass Spectrometry

Sponsored by Agilent Technologies
Chair: Qibin Zhang, University of North Carolina-Greensboro

8:30 126 Presentation of the EAS Award for Outstanding Achievements in Mass Spectrometry to Yinsheng Wang, University of California-Riverside

8:35 122 Quantitative Proteomic Approaches for Interrogating Nucleic Acid- and Nucleotide-Binding Proteins, Yinsheng Wang, University of California-Riverside

9:10 123 Quantification of Protein Post-Translational Modifications Using Stable Isotope and Mass Spectrometry, Grace Xinzhao Jiang, Amgen Inc.

9:50 Break

10:10 124 Applications of Mass Spectrometry in Biologics Drug Discovery and Development, Yongsheng Xiao, Shire Pharmaceuticals

10:50 125 Novel Approaches toward Analysis of Glycolipids, Qibin Zhang, University of North Carolina-Greensboro

EAS Award for Outstanding Achievements in Vibrational Spectroscopy

Sponsored by the American Microchemical Society
Chair: Bruce Hudson, Syracuse University

8:30 126 Biomedical Applications of SERS: Diagnostics, Metabolomics, Forensics, Lawrence Ziegler, Boston University

9:10 127 Real-Time and Nanoscale Infrared Imaging in the Biosciences, Lisa M. Miller, Brookhaven National Laboratory

9:50 Break

10:10 128 Vibrational Inelastic Neutron Scattering, Bruce Hudson, Syracuse University


American Microchemical Society Benedetti-Pichler Award Session Chair: Robert Vetrecin, American Microchemical Society

8:30 Presentation of the American Microchemical Society Benedetti-Pichler Award to Ryan C. Bailey, University of Michigan

8:35 130 Microscale Tools for Precision Medicine, Ryan C. Bailey, University of Michigan

9:10 131 Miniaturized Devices for the Analysis of Biomolecules Linked to Diseases, Adam T. Woolley, Brigham Young University

9:50 Break

10:10 132 Plasmonic Nanobiosensors: From Therapeutic Drug and Environmental Monitoring to Optophysiology of Living Cells, Jean-Francois Masson, University of Montreal

10:50 133 Rapid Dialysis-based Binding Measurements with 3D-Printed Integrated Membranes, Dana Spence, Cody Pinger, Andre Castiaux, Michigan State University

Recent Advances and Applications of Multidimensional Chromatography

Chair: Xiaohua Zhang, Merck & Co.

8:30 134 Recent Advances of Multidimensional HPLC: Beyond Peak Capacity and Orthogonality, Kelly Zhang, Jessica Lin, Sam Yang, Midco Tsang, Genentech

9:10 135 Applications and Method Development of 2D-LC for Small Molecule Pharmaceutical Analysis, Pankaj Aggarwal, David T. Fortin, Angel R. Diaz, Pfizer

9:50 Break

10:10 136 Recent Advances in Resolving Power and Detection Sensitivity of Two-Dimensional Liquid Chromatography for Bottom-Up Analysis of Therapeutic Proteins, Dwight Stoll, Hayley Lhotka, David C. Harmes, Benjamin Madigan, Gabriel Leme, Gustavus Adolphus College, Gregory Staples, Agilent Technologies

10:50 137 Adding Mass Detection to a USP Method Using Heart-Cutting Multi-Dimensional Liquid Chromatography, Margaret Mazzara, Claude Mallet, Paul Rainville, Mark Wrona, Waters Corp.

Solid State NMR Studies of Disordered Systems
Chairs: Dewey Barich, GlaxoSmithKline, Sophia Hayes, Washington University

8:30 138 Dynamic Disorder in Regulation of HIV-1 Maturation by Integrating Solid State NMR, cryo-EM, and MD, Caitlin M. Quinn, Mingzhang Wang, Hualian Zhang, Juan R. Perilla, Tatyana Polenova, University of Delaware, Rupal Gupta, College of Staten Island-CUNY, In-Ja Byeon, Peijun Zhang, Angela M. Gronenborn, University of Pittsburgh, Eric O. Freed, National Cancer Institute

9:10 139 Characterization of Amorphous Pharmaceutical Solids Using NMR Spectroscopy, Joe Lubach, Genentech

9:50 Break

10:10 140 High-Field Solid-State NMR of Disordered Solids, Dinu Iuga, University of Warwick

10:50 141 Structural Details from Quadrupolar Solid-State NMR of Solution-Processed Thin Films from Group 13 Oxide Molecular Precursors, Sophia E. Hayes, Jinlei Cui, Yvonne Afriyie, Washington University, Cory Perkins, Douglas A. Kesler, Oregon State University

Better Raman Spectroscopy through Chemometrics
Chair: Jim Rydzak, Specere Consulting

8:30 142 Understanding the Depth Response Profile of Transmission Raman Spectroscopy of Diffusely Scattering Media, Jun Zhao, B&W Tek
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<tr>
<th>Time</th>
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<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>10:10</td>
<td>146</td>
<td>Near Infrared Solutions for Biopharmaceutical Development and Manufacturing, Adam Hopkins, Mackenzie Speer, Metrohm USA</td>
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<tr>
<td>10:30</td>
<td>147</td>
<td>Drug Polymorphous Analysis Using Raman and NIR Spectroscopic Techniques: an Application in HME Process Optimization and Real-Time Monitoring, Herman He, Mohammed Ibrahim, Rui Chen, Thermo Fisher Scientific, Jiaxiang Zhang, Michael Repka, University of Mississippi</td>
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<tr>
<td>10:50</td>
<td>148</td>
<td>NIR Spectroscopy for Endpoint Analysis in Blending Operations, Edward Gooding, Viavi Solutions, Brad Swarbrick, Quality by Design Consultancy</td>
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<td>11:10</td>
<td>149</td>
<td>Autonomous Spectroscopy for Process Monitoring, Brian G. Rohrbach, Infometrix, Inc.</td>
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<tr>
<td>8:30</td>
<td>150</td>
<td>Analytical Solutions to Challenges in Headspace-GC-MS Analysis of Volatile Extractable and Leachable Compounds, Xiaoteng Gong, Dujuan Lu, Danny Hower, SGS North America Inc.</td>
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<td>8:50</td>
<td>151</td>
<td>An In-Depth Look at Osmium Characterization and Impurity Determination by ICP, Thomas J. Kozikowski, Inorganic Ventures</td>
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<td>10:10</td>
<td>155</td>
<td>Challenges in Root-Cause Investigation and Elimination of Artifact Peaks in the UPLC Impurity Profile of Compounds with Nosyl Group, Van Truong, Hao Luo, Robert Hartman, Merck &amp; Co.</td>
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<td>10:50</td>
<td>156</td>
<td>Application of LC-MS-MS to Study the Photodegradation of Pthalates: Kinetics and Intermediate Degradation Products, Xiaofei Lu, Yuegang Zuo, University of Massachusetts Dartmouth</td>
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<td><strong>Surface Analyses for Cultural Heritage I, organized by the New York Conservation Foundation</strong></td>
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<td><strong>Chair: Bart Devolder, Princeton University Art Museum</strong></td>
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<td>8:30</td>
<td>157</td>
<td>Old Museum Collections as a Source for New Chemical Analyses, Jennifer A. Loughmiller, Cardinal, Igor Lednev, University at Albany-SUNY</td>
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<td>9:10</td>
<td>158</td>
<td>Investigation of Painted Decorations and Soluble Nylon Coating on Japanese Sugito at the Philadelphia Museum of Art, Georgia A. Arbuckle-Keil, Rutgers University, Beth A. Price, Kate Duffy, Matthew Dustin, Peggy Olley, Katie Shulman, Wei Kao, Felice Fischer, Philadelphia Museum of Art</td>
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<tr>
<td>9:50</td>
<td>159</td>
<td>Spectroscopic and Diffraction Analysis of Verdigris Pigment &amp; Alteration Products on Organic Substrates (Paper and Gum Arabic), Marcie B. Wiggins, Emma Heath, Karl S. Booksh, Jocelyn Alcantara-Garcia, University of Delaware</td>
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<td>10:50</td>
<td>160</td>
<td>Egg as a Medium in Ancient Mycenaean, Greek and Roman Painting, Norman Muller, retired Princeton University Art Museum</td>
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<td><strong>Research from our Emerging Forensic Scientists, sponsored by New Jersey Association of Forensic Scientists</strong></td>
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<td><strong>Chair: Peter Diaczuk, Pedico Research Institute</strong></td>
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<td>8:30</td>
<td>161</td>
<td>Mass Spectrometry Study of Organic Gunshot Residue, Jillian Mizak, Monica Joshi, West Chester University of Pennsylvania</td>
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<td>9:10</td>
<td>162</td>
<td>The Prevalence of Male DNA Under a Female’s Fingernails, Alexis Baxter, Janine Kishbaugh, Cedar Crest College</td>
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<td>9:50</td>
<td>163</td>
<td>The Stability of Synthetic Cathinones of Toxicological Interest, Lexus R. Rutter, Karen S. Scott, Arcadia University, Heather L. Ciallella, Rutgers University</td>
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<td>10:10</td>
<td>164</td>
<td>Role of Insects in Human Identity, Shayna L. Gray, Scott Lindner, Reena Roy, Pennsylvania State University</td>
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<td><strong>New Developments in GC Analysis Capabilities</strong></td>
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<td><strong>Chairs: Brooke Kammrath, University of New Haven, Michelle Gallagher, Dow Chemical Company</strong></td>
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<td>8:30</td>
<td>165</td>
<td>Ghost Peaks and Artificially Increased Impurity Peaks in Both Direct Injection and Headspace GC Analyses due to Thermo Lability of Analytes and/or a Common Sample Diluent, Min Li, Huahai US</td>
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<tr>
<td>8:50</td>
<td>166</td>
<td>Development of New Products and Odor Problem Solving Using Gas Chromatography-Mass Spectrometry-Olfactometry Analysis, Michelle Gallagher, Elizabeth Snow, Jim DeFelippis, Jim Bohling, Paul Doll, Melissa Leach, Dow Chemical Company</td>
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Tuesday: E-Poster Session 1; 11:30 AM – 12:15 PM

181 LabVIEW Controlled Instrumentation for the Acquisition and Automation of Time-Based Fluorescence and Phosphorescence Measurements, Anthony M. Santana, Khang D. Trieu, Andres D. Campiglia, University of Central Florida, Stacy M. Wise, Chemosapiens Analytical

182 Spectroscopic and Computational Studies of PRODAN, Matthew J. Phillips, Swapnil Baral, Edward Lyman, Lars Gundlach, University of Delaware, Bjoeurn Baumeier, Eindhoven University of Technology

183 Use of FT-IR Spectroscopy to Classify and Discriminate Food Protein Powders, Ronald Rubinvitz, Thermo Fisher Scientific

184 Multimodal Tissue Segmentation of Prostate Cancer Biopsies Using Chemical Imaging, Anirudh Mittal, Shachi Mittal, Kevin Yeh, Jennifer Pfister, Rohit Bhargava, University of Illinois at Urbana-Champaign

185 Binary Spectrornepholometry (BSN) of Bacterial Cultures: Noninvasive Quantitative Raman Spectroscopy in Optically Thin or Dilute Two-Phase Samples, Steven Ortiz, Richard McDonough, Paul W. Dent, Jerry Goodisman, Joseph Chaiken, Syracuse University

186 Easy Monitoring of Cell Culture Growth Using Disposable Electrochemical Enzymatic Sensors, Haritha Subramanian Narayanan, Pablo Fanjul-Bolado, Metrohm USA

187 Analysis of Greenhouse Gases Using the Shimadzu GC-2014 with the ARC Jetanizer for CO2 and CO In-Jet Methanization, Ian W. Shaffer, Kyle O. Reddick, Yuan Lin, Martin D. Smith, Allison M. Mason, Shimadzu Scientific Instruments

188 Removing Polycyclic Aromatic Hydrocarbons (PAHs) by Adsorption onto Silica Gel Treated with Lipophilic Carboxylic Acids, Jessi Dolores, Jianwei Fan, Manhattan College

189 An Acoustic Levitator for Heterogeneous Chemical Reactions, Beni B. Dangi, Jordan Dixon, Florida A & M University


Tuesday: E-Poster Session 2; 12:15 PM – 1:00 PM

191 Selective Liquid Phase Hydrogenation of Cinnamaldehyde Using Metal Salts and Pd/AI203, Jessica M. Miller, Lindsey A. Welch, Cedar Crest College

192 The Effects of Solvents on the Hydrogenation of α-Methyl-Trans-Cinnamaldehyde with the use of Metal Chloride Additives, Kirsten R. Replogle, Cedar Crest College
Tuesday Afternoon, November 13, 2018

**EAS Award for Outstanding Achievements in Magnetic Resonance**
*Sponsored by Bruker BioSpin and New Era Enterprises*
Chair: Sophia E. Hayes, Washington University

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<tr>
<td>1:00</td>
<td>209 A Rewarding Journey into the Disordered World of Ion Conductors, Yan-Yan Hu, Po-Hsiu Chien, Xuyong Feng, Jin Zheng, Florida State University</td>
</tr>
<tr>
<td>1:40</td>
<td>210 Capturing and Quantifying Functional Dynamics in Viral Assemblies - Atomistic View from NMR, MD, and QM-MM, Tatyana Polenova, Caitlin M. Quinn, Mingzhang Wang, Manman Lu, Juan Perilla, University of Delaware, Angela M. Gronenborn, University of Pittsburgh</td>
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<td>2:20</td>
<td>Break</td>
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<tr>
<td>2:40</td>
<td>211 NMR Studies of Paramagnetic Materials: Structure-Activity Relationships in High Energy Li-Ion Cathodes, Fulya Dogan, Argonne National Laboratory</td>
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<td>3:20</td>
<td>Presentation of the EAS Award for Outstanding Achievements in Magnetic Resonance to Clare P. Grey, University of Cambridge</td>
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<tr>
<td>3:25</td>
<td>212 Developing and Applying New Tools to Understand How Materials for Li and “Beyond-Li” Battery Technologies Function, Clare P. Grey, University of Cambridge</td>
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The Current and Future Role of HILIC in the Separation World
Chair: Fabrice Griiti, Waters Corp.

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<tr>
<td>1:00</td>
<td>213 Hydration of Countercations Plays a Major Role in Retention and Selectivity in Hydrophilic Interaction Chromatography, Andrew J. Alpert, Poly LC Inc.</td>
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<tr>
<td>2:20</td>
<td>Break</td>
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<tr>
<td>2:40</td>
<td>215 Surface Chemistry Considerations in HILIC: Their Impact on Solvent Dynamics and Retention Mechanisms, David S. Bell, Restek Corp.</td>
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<td>3:20</td>
<td>216 Evaluation of New HILIC Columns for Pharmaceutical Analysis: Successes and Challenges, Zachary Breitbach, AbbVie</td>
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**Advances in Mass Spectrometric Analysis, sponsored by Cambridge Isotope Laboratories; organized by the NJ Mass Spectrometry Discussion Group**
Chair: Long Yuan, Bristol-Myers Squibb

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<th>Time</th>
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<tr>
<td>1:00</td>
<td>217 High Resolution Mass Spectrometry Bioanalysis, Qin Ji, Bristol-Myers Squibb</td>
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<tr>
<td>1:40</td>
<td>218 Hydrogen-Deuterium Exchange Mass Spectrometry (HDX-MS) Screening Approaches for Studying Global Conformational Structures of Peptides/Proteins in Solution, Alexey A. Makaroy, Nicole Schiavone, Gregory Pirrone, Nicholas Pierson, Ian Mangion, Merck &amp; Co.</td>
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<td>2:20</td>
<td>Break</td>
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Analytical Solutions to the Worlds Problems
Chair: Brian Eitzer, The Connecticut Agricultural Experiment Station

1:00 221 Wastewater-Based Monitoring of Community Health and Behavior. Kevin J. Bisceglia, Hofstra University

1:40 222 Analytical Solutions to Regulatory and Other Monitoring Problems. Steven Lehotay, United States Department of Agriculture

2:20 Break

2:40 223 Air Quality Monitoring in Nairobi. Priyanka de Souza, Senseable City Lab

3:20 224 Analytical Challenges in Studies of Pesticides and Pollinators. Brian Eitzer, Kimberly Stoner, Richard Cowles, The Connecticut Agricultural Experiment Station

Enabling Real Time Release Testing with PAT, organized by The Coblentz Society
Chair: Jim Rydzak, Specere Consulting

1:00 225 RTRT as the Final Piece of a Comprehensive Control Strategy in Continuous Manufacturing. Justin G. Pritchard, Kelly Swinney, Vertex Pharmaceuticals

1:40 226 Points to Consider in Developing an RTRt Capable NIR Method. Gary McGeorge, Bristol-Myers Squibb

2:20 Break


3:20 228 Enabling Real Time Release of Solid Oral Dose Products: A Case Study. Sarah Nielsen, Janssen

Spectroscopy Hits the Clinic, organized by The Coblentz Society
Chair: Brandye Smith-Goettler, Merck & Co.

1:00 229 Surgical Engineering Enables Intravital Imaging of Mechanisms of Metastasis in Primary and Secondary Sites. David Entenberg, Einstein College of Medicine

1:40 230 Chemical Imaging with a Quantum Cascade Laser for Rapid Cancer Assessment. Rohit Bhargava, Kevin Yeh, Shachi Mittal, University of Illinois at Urbana-Champaign

2:20 Break

2:40 231 Mid-Infrared Spectroscopic Imaging and Its Biomedical Applications. Rohith Reddy, Shihao Ran, University of Houston


Fillioe, Charles M. Peterson, Jerry Goodisman, Syracuse University, Paul Dent, St. Thomas Aquinas College, Sri Narsipur, State University of New York Upstate Medical University, Richard Steimann, James Mostrom, Crouse Hospital, Bin Deng, Massachusetts General Hospital Harvard Medical School

Modern Advances in Gas Chromatography, sponsored by the Chromatography Forum of the Delaware Valley
Chair: Marcelo Figuere, Dow Chemical Company

1:00 233 Bridging the Gaps between Comprehensive Multidimensional Separation Techniques. Tadeusz Gorecki, Hei-Yin Chow, Alshymaa A. Aly, University of Waterloo

1:40 234 Analysis of Stem Cells by Comprehensive Two-Dimensional Gas Chromatography/Time-of-Flight Mass Spectrometry. John Dimandia, Georgia Institute of Technology

2:20 Break

2:40 235 Adsorption Chromatography with New Intuvo GC Platform. Peilin Yang, Jim Luon, Ronda Gras, Yujian Hua, Dow Chemical Company

3:20 236 Improving Accuracy and Repeatability with Single Injection MS/Polyarc Split for E/L and VOC Analyses. Andrew J. Jones, Activated Research Company

Surface Analyses for Cultural Heritage II, organized by the New York Conservation Foundation
Chair: John Scott, New York Conservation Foundation

1:00 237 Applied Paint Analysis for Historic Architecture. Tina Reichenbach, Richbrook Conservation

1:40 238 Miniaturization of Noninvasive Analytical Instruments: A New Day and New Tools for the Paper Conservator. Ted Stanley, Collections Conservation, Rare Books & Special Collections, Princeton University Library

2:20 Break

2:40 239 An ESR Mobile Universal Surface Explorer. Joseph P. Hornak, Lauren E. Switala, Baron E. Black, Celia A. Mercovich, Anjana Seshadri, RIT Magnetic Resonance Laboratory


Pharmaceutical Drug Product Quality
Chair: Leonel Santos

1:00 241 Public Standards for Radioactive Drugs. Steve Zigler, PETNET Solutions, Ravi Ravichandran, United States Pharmacopeial Convention

1:40 242 Impact of a Packaging System on Drug Quality and USP’s Effort to Revise its Packaging Standards. Desmond Hunt, United States Pharmacopeia

2:20 Break

2:40 243 Over-the-Counter Drug Product Standard – USP Initiatives. Sujatha Ramakrishna, United States Pharmacopeia

Forensic Microscopy “What is it? Who does it?,” sponsored by the New York Section of the American Chemical Society Chair: Thomas Kubic, John Jay College of Criminal Justice

1:00  245 Examining Elemental Analysis by SEM/EDS in Forensic Paint Comparisons, Ethan Groves, Christopher S. Palenik, Microtrace LLC

1:40  246 The Analysis of Dyed Beaver Furs Using Transmission and Fluorescence Micro-Spectrophotometry, Frani Kammerman, Mircea A. Comanescu, Tiffany J. Millet, John Jay College of Criminal Justice

2:20  Break

2:40  247 Microscopy as a Tool in Environmental, Health, and Safety Investigations, Andrew Havics, pH2, LLC

3:20  248 Screen Shot, Peter Diazza, Xiao Shan Law, Pedico Research Institute

Wednesday, November 14, 2018

EAS Award for Outstanding Achievements in the Fields of Analytical Chemistry
Sponsored by Bristol-Myers Squibb and HORIBA Scientific
Chair: Isiah M. Warner, Louisiana State University

9:10  250 Designer Separations with Smart Nanomaterials, Lisa Holland, West Virginia University
9:50  Break
10:10  251 Spectroscopy through the Microscope: Probing What’s Happening Inside Chromatographic Silica Particles, Joel Harris, David A. Bryce, Jay P. Kitt, University of Utah
10:50  252 Looks Can be Deceiving: Spectrochemical Analysis Applied to Ocular Surface Phenomena, Frank V. Bright, State University of New York - Buffalo
11:30  Break
11:45  Presentation of the EAS Award for Outstanding Achievements in the Fields of Analytical Chemistry to Linda B. McGown, Rensselaer Polytechnic Institute

New York Microscopical Society Ernst Abbe Award
Chairs: John Reffner, John Jay College of Criminal Justice, Brooke Kammrath, University of New Haven

8:30  254 Learning about the Small Things that Have Big Impacts on Individual’s Lives, Charles Morton, retired, Forensic Analytical Sciences
9:10  255 The Mystery of the Lost World Trade Center 9/11 Flag: A Trace Evidence Case for the Ages, Nicholas Petraco, Nicholas D. Petraco, John Jay College of Criminal Justice
9:50  Break
10:50  Presentation of the New York Microscopical Society Ernst Abbe Award to Peter R. De Forest, John Jay College of Criminal Justice
10:55  257 Inspiring Microscopy, Peter R. De Forest, John Jay College of Criminal Justice

Analytical Chemistry on the Go: Handheld Spectroscopy Applications, organized by The Coblentz Society
Chair: Brandye Smith-Goettler, Merck & Co.

8:30  258 Use of Handheld Spectrometers as Screening Tools for Detection of Substandard and Falsified Medicines, Perceptions and Reality, Mustapha Hajjou, Stephen Kimatu, United States Pharmacopeia
9:50  Break
10:10  260 Use of Handheld Raman and Near-Infrared Spectroscopic Techniques for Identifying Counterfeit Lifestyle and Life-Saving Medicines, Sulassai Thomas Coombs, Jacob McEachran, Bournemouth University
10:50  261 Handheld Visible Spectrometry: the Promise and the Limitations, Alexander Scheeline, Spectro Click Inc.

Modern Applications of Supercritical Fluid Chromatography, sponsored by the Chromatography Forum of the Delaware Valley
Chair: Ray McClain, Merck & Co.

8:30  262 Innovative Techniques and Applications of Supercritical Fluid Chromatography for Drug Discovery Support, Yingru Zhang, Bristol-Myers Squibb, Chunlei Wang, Med Immune
9:10  263 Supercritical Fluid Chromatography-Mass Spectrometry for Use in PK/PD Studies, Fangbiao Li, Merck & Co.
9:50  Break
**Technical Program**

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<tr>
<th>Time</th>
<th>Session</th>
<th>Chair(s)</th>
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<tbody>
<tr>
<td>10:50</td>
<td>Revolutionizing Pharmaceutical Compound Analysis by Implementation of 2D-LC-SFC-MS</td>
<td>Mohammad Al-Sayah, Meenakshi Goel, CJ Venkatramanani, Gentech, Eli Larson, Gustavus Adolphus College</td>
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**Sensitive Electrochemical Methods from Sensors to Catalysis**

Chairs: Michael B. Hicks, Justin Newman, Merck & Co.

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<th>Time</th>
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<tr>
<td>8:30</td>
<td>Neurotransmitter-Metabolite Detection with Fast Scan Cyclic Voltammetry</td>
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<td>8:50</td>
<td>Naked-Eye Electrochemical E.coli. Detection</td>
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<td>9:10</td>
<td>Performance of Electrochemical Sensor of Nitrite, a Biomarker of Oxidative Stress, in Exhaled Breath Condensate</td>
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<td>9:30</td>
<td>Zirconium-Iridium Mixed Oxide Electrocatalysts for the Oxygen Evolution Reaction</td>
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**Raman Material Identification**

Chairs: Michael B. Hicks, Justin Newman, Merck & Co.

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<tr>
<td>10:10</td>
<td>Application of 2D COS Raman Spectra to Structural Elucidation of Polymers</td>
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<td>10:30</td>
<td>Counterfeit Tablet Analysis Using a Handheld Raman Spectroscopy</td>
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<td>10:50</td>
<td>Improving RMID Results with Handheld Raman Instrument Control Parameters</td>
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<td>11:10</td>
<td>Investigation of Physical and Chemical Variability on Quantitative Transmission Raman Models</td>
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**Novel Approaches to Analysis of Extreme Eco-Toxicological Contaminants**

Chair: Penny Moore

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<tr>
<td>8:30</td>
<td>Determination of Polycyclic Aromatic Compounds in SRM 1597a via Normal-phase Liquid Chromatography and Gas Chromatography-Mass Spectrometry, Hugh V. Hayes, Andres D. Campiglia, University of Central Florida, Walter B. Wilson, Lane C. Sander, Stephen A. Wise, National Institute of Science and Technology</td>
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<tr>
<td>8:50</td>
<td>Investigation of Photodegradation Products of High-Molecular Weight Polycyclic Aromatic Hydrocarbons in Seawater, Anthony F. T. Moore, Sadia Arif, Andres D. Campiglia, University of Central Florida</td>
</tr>
<tr>
<td>9:10</td>
<td>Determination of High Molecular Weight Polycyclic Aromatic Hydrocarbons via Fluorescence Wave-length-Time Matrices and Time-Resolved Excitation Emission Matrices in Environmental Extracts, Khang D. Trieu, Stacy M. Wise, Anthony Santana, Andres Campiglia, University of Central Florida</td>
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<tr>
<td>9:30</td>
<td>New Simultaneous Optical Technique for Monitoring Organic Pollutants in Source Water</td>
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<td>10:10</td>
<td>Application of Electrochemistry in Extreme Environments</td>
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<td>10:30</td>
<td>Screening of Pesticides in Bat Guano</td>
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<td>10:50</td>
<td>High Performance Silica Based Organic-Inorganic Hybrid Catalytic Materials for Industrially Significant Organic Transformations &amp; Degradation of Toxic Pollutants Present in Wastewater</td>
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<td>11:10</td>
<td>Design and Synthesis of Functionalized Magnetic Nanoadsorbents for the Selective Removal of Metal Ions</td>
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**Optimizing HPLC Analysis through Column Selection and Modeling**

Chairs: Mariann Neverovitch, Elizabeth Moroney, Bristol-Myers Squibb

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<tr>
<td>8:50</td>
<td>Streamlined Reversed Phase HPLC and UHPLC Method Development Using a Combined Column Screening and Software Modeling Approach, Geoffrey M. Faden, MAC-MOD Analytical, Alan P. Mckeeown, Advanced Chromatography Technologies</td>
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<tr>
<td>9:10</td>
<td>A Bio-Inert, Durable, and Reliable Surface for HPLC and UHPLC Columns and Components Used in the Analysis of Proteins and Other Difficult Molecules, Jesse Bischof, David Smith, Gary Barone, Luke Patterson, SilcoTek Corp.</td>
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<tr>
<td>9:30</td>
<td>Retention Modeling and In Silico Optimization: An Integral Component of Reverse Phase Liquid Chromatography Method Development, Karthik Jayaraman, Ashok Kumar Rajendra, Saravanan Natarajan, Santosh Gandhi, Mallikarjun Narayanan, Hemant Bhutani, Bristol-Myers Squibb - Biocon Research Center</td>
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**Challenges in Pharmaceutical Analysis: Formulations and Method Transfer**

Chairs: Mariann Neverovitch, Elizabeth Moroney, Bristol-Myers Squibb

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<tr>
<td>10:10</td>
<td>A Multicompartment Transfer System: Understanding a Non-Linear In Vivo Behavior of Compound A Amorphous Solid Dispersion, Sanjaykumar Patel,</td>
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This program is printed on 100% recycled paper
Advances in Spectroscopy for Food Safety and Quality
Chair: Suzanne Schreyer, Rigaku Analytical Devices

10:30 287 All You Wanted to Know about HPLC Method Development and Transfer, but were Afraid to Ask, Stephanie A. Schuster, Conner W. McHale, Advanced Materials Technology, Inc., Thomas J. Waege, Mac-Mod Analytical


11:10 289 Correlated Chemical and Morphology Imaging to Investigate Formulation Dissolution, Slobodan Sasic, Kenneth J. Smith, Tim Prusnick, George Butcher, Hazel Garvie-Cook, Renishaw

Averting Drinking Water Disasters with Analytical Chemistry
Chairs: James Stuart, University of Connecticut, Satinder Ahuja, Ahuja Consulting

8:30 290 Photonics Devices - Do We have Everything We Need to put these Devices into the Hands of an Untrained User, Ellen Miseo, TeakOrigin


9:50 Break

10:10 292 Detecting Herb and Spice Adulteration Using Near-Infrared Spectroscopy, Ariel Bohman-Paolo, Kathryn Lawson-Wood, PerkinElmer

10:50 293 Testing the Next Generation of Quality Assurance Devices for High Commodity Products, Mei-Ling Shotts, Ohio State University

Wednesday: E-Poster Session 1; 12:30 PM – 1:15 PM

298 UPLC-MS-MS Analysis of Cortisol in Hair and Saliva Collected from Human Subjects, Jake E. Cortigiano, Sarah Anderson, Patrick Kaplita, James D. Stuart, Anthony A. Provatas, Christopher R. Perkins, University of Connecticut

Wednesday Afternoon, November 14, 2018

Memorial Session Honoring Richard Saferstein, sponsored by New Jersey Association of Forensic Scientists
Chair: Thomas Brettell, Cedar Crest College

1:30 316 Dr. Richard Saferstein’s Contributions to Forensic Science in New Jersey, Thomas Brettell, Cedar Crest College

2:10 317 Forensic Mass Spectrometry: The Past, Present and Future - A Discussion Honoring the Immeasurable Contributions of Dr. Richard Saferstein to the Field of Forensic Science, Adam B. Hall, Northeastern University

2:50 318 Dick Saferstein: Leader, Mentor, Friend, Neil J. Jespersen, St. John’s University


Enhancement Strategies in Raman and Infrared Spectroscopy, organized by The Coblentz Society
Chair: Brandye Smith-Goettler, Merck & Co.

1:30 320 Directional Raman Scattering: A Tool for Measuring Adsorption and Chemical Content at Smooth Interfaces, Emily A. Smith, Charles K.A. Nyamekye, Iowa State University, Stephen C. Weibel, Surface Photonics Inc.

2:10 321 Surface Enhanced Raman Spectroscopy for Food Safety Applications, Lili He, University of Massachusetts - Amherst

2:50 322 Pharmaceutical Case Studies Using Transmission Raman, Julia A. Griffen, Agilent Technologies

3:30 323 What are the Physical Limits to Field Amplification and Intensity Enhancement in Surface Enhanced Raman Spectroscopy?, Stefan Franzén, North Carolina State University

Optimization of Laboratory Practices and Analytical Methods
Chair: Anthony Provatas, University of Connecticut

1:30 324 Accelerating Pharmaceutical Development from Pre-Candidate Selection to First-Time-in-Human Clinical Studies Using Automated Platforms, Kaitlin M. Grinias, GlaxoSmithKline

1:50 325 Peptide Mapping: Best Practices for Generating Reliable and Robust Liquid Chromatography Methods, Jennifer Simeone, Paula Hong, Waters Corporation

2:10 326 A New Route to Automation of Experimentation, Scot Abbott, Phoenix


2:50 328 Increasing Sample Throughput Using Parallel Column Regeneration, Zhimin Li, Paula Hong, Patricia McConville, Waters

3:10 329 Reviving and Repurposing Laboratory Equipment, Scot Abbott, Phoenix

3:30 330 New Zinc Oxide Assay as per USP 591 Using Ion Chromatography with PCR and UV-Vis Detection, Haritha Subramanian Narayanan, Shibu Paul, Jay Sheffer, Metrohm USA

Testing of Active Compounds and Contaminants in Food & Cannabis Products
Chair: Oscar Liu, Silver Spring Scientific LLC

1:30 331 Determination of Polyphenols, Glycoalkaloids and Saponins in Solanum Scabrum Fruits Using LCUV-MS, Bo Yuan, James Simon, Qingli Wu, Rutgers University

1:50 332 Functional Cannabis: Pharmacological Foundations of Cannabis Chemovars, Mark Lewis, Napo Research

2:10 333 Terpenes and Residual Solvents in Cannabis by Headspace GCMS, Thomas Mancuso, David Scott, Lee Marotta PerkinElmer Inc.

2:30 334 Cannabinoid Monitoring in Dried Cannabis Flower and Edibles by HPLC-PDA, Jamie Foss, PerkinElmer

Proteomics and Protein Bioanalysis
Chairs: Wenying Jian, Janssen R&D, John Kellie, GlaxoSmithKline

1:30 335 Wide Pore Superficially Porous Particles with Various Bonded Phases for High Resolution Protein Chromatography, William Miles, Barry Boyes, Benjamin Libert, Stephanie Schuster, Brian Wagner, Conner McHale, Advanced Materials Technology

1:50 336 Application of Time-Resolved Fluorescence Spectroscopy to Monitor Protein Higher Order Structure Changes, Sergey Arzhantsyev, United States Food and Drug Administration

2:10 337 Proteomic Analysis of the Lake Trout (Salvelinus Namaycush), Emmanuil J. Dupree, Bernard Crimmins, Thomas Holsen, Costel C. Darie, Clarkson University, James Pagano, SUNY-Oswego

2:30 338 Mass Spectrometry Based Proteomics Investigation of Induced Obstructive Sleep Apnea (OSA) in Rat Atia, Costel C. Darie, Devika Channaveerappa, Jacob Lux, Kelly L. Wormwood, Clarkson University, Brian Panama, Meredith McLerie, Masonic Labs

2:50 339 Preventing Separation Anxiety: Strategies and Techniques for Improved Biomacromolecule Separations, Cory E. Muraco, Gary Oden Jr., Michael Ye, MilliporeSigma

3:10 340 Probing Peptide-Peptide/Peptide-Excipient Interactions Using Native Mass Spectrometry, Yuejie Zhao, Jameson Bothe, Alexandra Andrews, Yong Liu, Andreas Abend, Peter Wueffling, Merck & Co., Pengyi Zhao, Hao Chen, New Jersey Institute of Technology

Ensuring Quality of Pharmaceutical Products
Chairs: Leonel Santos, Sujatha Ramakrishna, United States Pharmacopeia
1:30  341  USP-FDA Collaboration: Development of a Documentary Public Standard Diphenhydramine and Phenylephrine Hydrochlorides Oral Solution, Clydewyn M. Anthony, Leonel M. Santos, United States Pharmacopeial Convention, Douglas Kirkpatrick, Jan Yang, Margaret Fein, Federal Drug Administration

1:50  342  USP Monograph Modernization - Ion Chromatography Applications, Harihara Subramanian Narayanan, Metrohm USA

2:10  343  Strategy and Troubleshooting for Analytical Method Transfers to Global Manufacturing Sites in Support of a Small Molecule Multistep Synthesis, Peter I. Tattersall, Xuejun Xu, Xin Bu, Lydia Breckenridge, Mohan Kanthasamy, Adrian Doggett, Diarmuid Scanlon, Morgan O’Sullivan, Bristol Myers Squibb

2:30  344  Multiple Techniques for Determination of Amorphous Content of Crystalline Pharmaceutical Materials, Charles Potter, TA Instruments

2:50  345  The Karl Fischer Titration Process, Bruce C. Herzig, MilliporeSigma

3:10  346  Accurate Moisture Determination in Lyophilized Products, Kerri-Ann Blake, Metrohm USA


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- **SPEAKERS** a complete listing of all speakers at the event
- **EXHIBITORS** a searchable list of all exhibiting companies & a list of exhibiting companies you were automatically matched with during registration
- **GREEN TOUR** a NEW electronic ‘scavenger hunt’
Join us in the Amphitheatre to hear these experts:

**Keynote Speaker**  
**Sponsored by Kuraray America**  
Monday, November 12, 4:15PM  
**Dr. John Warner**  
Warner Babcock Institute for Green Chemistry  
Title: Green Chemistry: The Missing Elements  
Reception immediately following

**Breakfast Lecture***  
**Sponsored by Shimadzu Scientific Instruments**  
Tuesday, November 13, 7:30AM  
**Dr. Mark Schure**  
Kroungold Analytical, Inc  
Title: Making the Case for Multidimensional Liquid Chromatography in the Search for Biomarkers  
Light breakfast provided  
(*Symposium & Exposition Conferee or Full-Time Student Conferee registration required to attend the Breakfast Lecture)

**Plenary Lecture**  
Wednesday, November 14, 11:45AM  
**Professor Linda McGown**  
Rensselaer Polytechnic Institute  
Title: Aptamers: A Case Study in Chemical vs. Biological Evolution  
Light refreshments immediately following
Highlights in the Exposition Area

Come and visit the EAS Exposition to learn about the latest technology from our exhibitors. The Exposition Area is located in the Lakeside Terrace Ballroom, Madison Room, and Wilson Room on the first floor of the Conference Center and in the Waterfront Room and Bridgeview Room on the lower level. The Exposition is also an excellent place to network and meet up with your colleagues.

A Special Mixer in the Exposition Hall
Sponsored by Shimadzu and Thermo Fisher Scientific
Tuesday, November 13, 2018
4:00 to 5:30 PM

EAS invites all registered attendees to join us at our annual Exposition Mixer. Sample butler passed hors d’oeuvres, appetizers and refreshments while learning about the newest developments in analytical instrumentation, supplies, technologies and services. The Exposition Mixer is a wonderful opportunity to touch base with technology and a fun way to end the day at EAS.

This Mixer is open to all registered attendees.

2018 EAS Technology Tour

Your Technology Tour Passport, which includes the names, booth locations, and logos of the Technology Tour sponsors, is included with your Final Program. If you visit 10 of the participating companies and get your Passport marked, you are eligible to redeem it for your choice of a special gift at the EAS Souvenir Booth located in the Bridgeview Room on the lower level. If you visit all 20 of the participating companies, in addition to the special gift, you will be eligible to enter a daily drawing to win an Amazon gift card. The drawings take place at the EAS Souvenir Booth daily at 3:00 PM, so be sure to have your Passports validated there prior to that time. Exhibitors participating in the 2018 Technology Tour are:

Exhibitors participating in the 2018 Technology Tour are:

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- AMETEK Arizona Instrument
- Cayman Chemical Company
- DWK Life Sciences
- GERSTEL
- Gibraltar Laboratories
- Malvern Panalytical
- Mettler Toledo
- MilliporeSigma
- Omicron Scientific
- Princeton Instruments
- Restek
- Sciex
- Shimadzu Scientific Instruments
- TA Instruments
- Thermo Fisher Scientific
- USP
- VIAVI Solutions
- VUV Analytics

Green Tech Tour

As the 2018 EAS focuses on Going Green, we are pleased to announce our inaugural Green Tech Tour. This year we are piloting an electronic ‘scavenger hunt’ as a prelude to a totally electronic technology tour in the future. The 2018 EAS Green Tech Tour is another step forward in EAS’s commitment to a green and sustainable conference.

The Green Tour will focus on the EAS Sponsoring Organizations. Visit the tabletop of each of the participating organizations below and discover how these professional organizations can help you and your career, and how you can help promote your profession through them. All of these organizations are located on the 1st floor in the area near the Madison and Wilson Rooms.

ACS New York Section NY/NJ Regional Section SAS
Chromatography Forum of Delaware Valley The Coblentz Society
New York Microscopical Society

All you need to do is download the EAS mobile app and click on the “Green Tour” icon on the electronic device that is probably close to your hand already. Then visit the tabletop of the participating organizations. While at the tabletop, scan the code for that organization. When you have completed the tour, take your electronic device to the EAS Souvenir Booth in the Bridgeview Room, and receive a Green Gift available ONLY to those who complete the Green Tour. Join us in promoting a green and sustainable conference.
2018 EAS Awards

EAS Award for Outstanding Achievements in the Fields of Analytical Chemistry, Sponsored by Bristol-Myers Squibb and HORIBA Scientific
On Wednesday, November 14, 2018, Professor Linda B. McGown, Rensselaer Polytechnic Institute, will receive the EAS Award for Outstanding Achievements in the Fields of Analytical Chemistry.

Linda Baine McGown is the William Weightman Walker Professor of the Department of Chemistry and Chemical Biology at Rensselaer Polytechnic Institute. Dr. McGown received her B.S. in chemistry from the State University of New York at Buffalo and her Ph.D. in chemistry from the University of Washington. She was a faculty member at California State University, Oklahoma State University and Duke University before joining RPI in 2004. She has been a fellow of the American Association for the Advancement of Science and has received the New York Section of the Society for Applied Spectroscopy Gold Medal Award. Included in the 2016 Power List: The Top 50 Most Influential Women in the Analytical Sciences, and in The Future of Women in Chemistry and Science in honor of UNESCO as one of “60 exemplary thinkers each speaking for 60 seconds about how to expand women’s leadership in the sciences, across all disciplines and sectors”. Professor McGown became acquainted with aptamers, which were under investigation primarily as novel pharmaceuticals. She and co-authors wrote an A-page report to Analytical Chemistry citing the potential advantages of aptamers in many areas of separation, stationary phase design, advanced modifications of proteins. Yinsheng has trained or mentored more than 100 scientific papers published in peer-reviewed journals. He is an author/co-author of 5 book chapters and more than 100 scientific papers published in peer-reviewed scientific journals. He is an author/co-author of 5 book chapters and more than 100 scientific papers published in peer-reviewed scientific journals. He is an author/co-author of 5 book chapters and more than 100 scientific papers published in peer-reviewed scientific journals.

Clare P. Grey is the Geoffrey Moorthouse-Gibson Professor of Chemistry at Cambridge University and a Fellow of Pembroke College Cambridge. She received a BA and D. Phil. in Chemistry from the University of Oxford. After post-doctoral fellowships in the Netherlands and at DuPont CR&D in Wilmington, DE, she joined the faculty at Stony Brook University (SBU) as an Assistant, Associate and then Full Professor. She moved to Cambridge maintaining an adjunct position at SBU. Professor Grey has been the director and associate director of the Northeastern Chemical Energy Storage Center, a DOE Energy Frontier Research Center. She is currently the director of the EPSRC Centre for Advanced Materials for Integrated Energy Systems (CAMIES). Recent honors/awards include the Research Award from the International Battery Association, the Royal Society Davy Award, the Arvedson-Schlenk-Preis from the German Chemical Society; the Société Chimique de Frang; French-British Prize and the first recipient of the International Solid State Ionics Galvani-Nernst-Wagner Mid-Career Award. Dr. Grey is a Fellow of the Royal Society and elected as a foreign member of the American Academy of Arts and Science and Fellow of the Electrochemical Society. Her current research interests include the use of solid state NMR and diffraction-based methods to determine structure-function relationships in materials for energy storage (batteries and supercapacitors), conversion (fuel cells) and carbon capture.

EAS Award for Outstanding Achievements in Mass Spectrometry, Sponsored by Agilent Technologies
On Tuesday, November 13, 2018, Professor Yinsheng Wang, University of California - Riverside, will receive the EAS Award for Outstanding Achievements in Mass Spectrometry.

Yinsheng Wang received his Ph. D. degree from Washington University in St. Louis after obtaining his BS and MS degrees from Shandong University and Dalian Institute of Chemical Physics, Chinese Academy of Sciences, respectively. He joined the faculty of the University of California Riverside, where he is now a Professor and Donald T. Sawyer Endowed Founder’s Chair in Chemistry. Yinsheng also serves as the Director for the Environmental Toxicology graduate program at UC Riverside. His current research involves the use of mass spectrometry, along with synthetic organic chemistry and molecular biology, for examining the occurrence and biological consequences of DNA damage and for assessing the biological functions of post-translational modifications of proteins. Yinsheng has trained or mentored many roles including Senior Vice President of R&D and Chief Science Officer at Dionex Corporation. Mr. Pohl has served as Vice President, Research and Development of Ciphergen Biosystems, Inc., a provider of proteomics tools. Prior to joining Dionex, he worked as an analytical chemist at the Ciorox Technical Center and Chevron Chemical.

Christopher Pohl is Vice President, Chromatography Chemistry at Thermo Fisher Scientific. Prior to the acquisition of Dionex by Thermo Fisher Scientific, Christopher held many roles including Senior Vice President of R&D and Chief Science Officer at Dionex Corporation. Mr. Pohl has served as Vice President, Research and Development of Ciphergen Biosystems, Inc., a provider of proteomics tools. Prior to joining Dionex, he worked as an analytical chemist at the Ciorox Technical Center and Chevron Chemical.

Mr. Pohl is the author or co-author of 5 book chapters and more than 100 scientific papers published in peer-reviewed scientific journals. He is an author/co-author of 5 book chapters and more than 100 scientific papers published in peer-reviewed scientific journals. He is an author/co-author of 5 book chapters and more than 100 scientific papers published in peer-reviewed scientific journals. He is an author/co-author of 5 book chapters and more than 100 scientific papers published in peer-reviewed scientific journals.
EAS Young Investigator Award, sponsored by The Dow Chemical Company

On Monday, November 12, 2018, Professor Kerri Pratt, University of Michigan, will receive the EAS Young Investigator Award.

Kerri Pratt is the Seyhan N. Ege Assistant Professor of the Department of Chemistry and Department of Earth & Environmental Sciences at the University of Michigan. Dr. Pratt received her B.S. in Chemistry from the Pennsylvania State University and her Ph.D. in Chemistry from the University of California, San Diego. She completed her postdoctoral research at Purdue University as a NOAA Climate & Global Change Fellow and NSF Fellow in Polar Regions Research. Her academic focuses on the application of novel mass spectrometry methods to the study of the chemical interactions of atmospheric trace gases, particles, clouds, and snow to improve understanding and prediction of air quality and climate change. Using a chemical ionization mass spectrometer, she has made significant advances in understanding Arctic snowpack photochemical reactions resulting in the production of molecular halogen trace gases at sub-ppt to ppt levels. Overall, her research group strives to tackle critical scientific questions in the Arctic where low analyze concentrations and logistically difficult conditions challenge traditional methods. For her innovative research, she has received numerous awards, including the American Society for Mass Spectrometry Research Award, National Academy of Sciences Gulf Research Program Early Career Fellowship, Sloan Research Fellowship in Chemistry, and the James J. Morgan Environmental Science & Technology Early Career Lectureship from ACS.

EAS Award for Outstanding Achievements in Vibrational Spectroscopy, sponsored by American Microchemical Society

On Tuesday, November 13, 2018, Professor Stephen Cramer, University of California-Davis, will receive the EAS Award for Outstanding Achievements in Vibrational Spectroscopy.

Stephen Cramer is an Advanced Light Source Professor at UC Davis. He fell in love with chemistry in second grade, when he received his first Gilbert chemistry set and watched Mr. Wizard on TV. His Ph.D. thesis work involved the first EXAFS studies of metalloenzymes at the newly founded Stanford Synchrotron Radiation Project, along with Raman spectroscopy and CARS. Following an NIH postdoc at Cal Tech, he joined Exxon Research in New Jersey, followed by Schlumberger-Doll Research, then continued to the National Synchrotron Light Source at Brookhaven National Lab. His second-grade academic aspirations came true when he joined UC Davis in a joint position with Lawrence Berkeley National Laboratory.

For most of his career, Cramer’s research has focused on synchrotron-based spectroscopic techniques for chemical characterization of biological systems and complex materials. Despite heavy involvement with x-rays, vibrational spectroscopy has remained dear to his heart. His favorite technique, nuclear resonance vibrational spectroscopy (NRVS), merges these two fields—a synchrotron x-ray experiment which provides vibrational information.

Cramer’s current research emphasizes the enzymes that fix nitrogen (nitrogenase) or produce hydrogen (hydrogenase). He is proud to have mentored over 40 students and postdoctoral associates. Professor Cramer has been honored with the ACS ‘Spectrochemical Analysis Award’, the Edward Stern Outstanding Achievement Award from the International X-Ray Absorption Society, the Lu Jiaxi Lecture from Xiamen University, an AAAS fellow, the New York Society for Applied Spectroscopy Gold Medal, a Humboldt Foundation Research Award, and an Einstein Visiting Fellowship at TU-Berlin.

New York/New Jersey Society for Applied Spectroscopy Gold Medal Award

On Monday, November 12, 2018, Professor Igor K. Lednev, University of Albany-SUNY, will receive the New York Society for Applied Spectroscopy Gold Medal Award.

Igor K. Lednev is currently a Full Professor at the University at Albany, State University of New York. He received his Ph.D. from the Moscow Institute of Physics and Technology and then was a group leader at the Institute of Chemical Physics, Russian Academy of Sciences. Lednev then worked in several leading laboratories including York University, UK, Durham University, UK and University of Tsukuba, Japan. At the University of Pittsburgh, Professor Lednev participated in building the first nanosecond time resolved temperature-jump apparatus with ultraviolet Raman spectroscopic detection and utilized it for the kinetic studies of protein folding.

Prof. Lednev’s research is focused on the development of novel laser spectroscopy for medical diagnostics and forensic purposes. Accomplishments include a new approach for the noninvasive, early diagnostics of neurodegenerative diseases such as Alzheimer’s and Parkinson’s, and novel methods for the detection and characterization of biological stains, gunshot residue, hair and trace evidence from a crime scene.

Dr. Lednev has co-authored over 200 peer reviewed publications with media coverage including TV and radio interviews, the Wall Street Journal, Chemical & Engineering News, and Forensic Magazine. Dr. Lednev has served as an advisory member on the White House Subcommittee for Forensic Science, and is currently a Fellow and Governing Board member of the Society for Applied Spectroscopy. Currently, he serves on the editorial boards of the Journal of Raman Spectroscopy, Forensic Chemistry and Biochimica et Biophysica Acta - Proteins and Proteomics. He has received a Guest Professor Fellowship from the Abbe Center of Photonics at Friedrich-Schiller-University, Germany, the Research Innovation Award from Research Corporation, and both the Chancellor’s Award for Excellence in Scholarship and the Creative Activities and CAS Dean’s Award for Outstanding Achievements in Teaching from the University of Albany.

American Microchemical Society Benedetti Pichler Award

On Tuesday, November 13, 2018, Professor Ryan C. Bailey, University of Michigan, will receive the American Micro-chemical Society Benedetti Pichler Award.

Ryan C. Bailey was raised in Jonesboro, Illinois, received a BS in Chemistry from Eastern Illinois University then his PhD in Chemistry Northwestern. Prof. Bailey was the recipient of a Graduate Fellowship from the Analytical Division of ACS and named a Northwestern University Presidential Fellow, his postdoctoral training was at Caltech at the Institute for Systems Biology. Prof. Bailey began his academic career at University of Illinois, now he is the Robert A. Gregg Professor of Chemistry at the University of Michigan.

Prof. Bailey’s research focuses on the development of enabling microscale technologies for applications in precision medicine. He has a strong interest in creating highly multiplexed detection strategies for in vitro diagnostic applications and Prof. Bailey’s group has pioneered the application of silicon photonic microring resonator arrays as a versatile platform for biomolecular detection. Prof. Bailey’s group is also developing a suite of microfluidic tools for sample-limited bioanalyses with a particular emphasis on enabling low input epigenomic profiling.

Prof. Bailey has authored over 80 publications and multiple pending and issued patents. Prof. Bailey currently serves on the Editorial Board and is an Associate Editor for Analyst. Prof. Bailey’s research accomplishments have also been recognized with a National Institutes of Health Director’s New Innovator Award, a Sloan Foundation Fellowship, the Arthur F. Findias Award for Achievements by a Young Analytical Scientist given by the ACS Division of Analytical Chemistry, and the Pittsburgh Conference Achievement Award.
The New York Microscopical Society Ernst Abbe Award

On Wednesday, November 14, 2018, Dr. Peter R. De Forest, John Jay College of Criminal Justice, will receive the New York Microscopical Society Ernst Abbe Award.

Dr. Peter R. De Forest is Professor Emeritus of Criminalistics at John Jay College of Criminal Justice, City University of New York. He began his career in forensic science at the County Sheriff’s Crime Laboratory in Ventura, CA. De Forest earned a BS in Criminalistics and a Ph.D. of Criminology from UC Berkeley and has served as a scientific consultant and expert witness in criminal and civil casework in the US, the UK and Canada. Professor De Forest is the author or co-author of numerous scientific articles, several book chapters and a textbook, and has served as an editorial board member of the Journal of Forensic Sciences. Dating from the inception of the American Board of Criminalistics (ABC), Professor De Forest served as the chairman of Examination Committee.

Professor De Forest was a Visiting Professor at the University of Strathclyde, Scotland and has co-taught a workshop at the University of Connecticut. He served as an Exchange Professor with the National Crime Faculty at Police Staff College, Bramshill, UK and delivered the Founders Lecture for the California Association of Criminalists (CAC). Dr. De Forest was a founding commissioner with the Forensic Science Education Program Accreditation Commission (FEPAC) of the American Academy of Forensic Sciences (AAFS) and was Criminalistics Section Chairman of the AAFS. Awards received include: the Paul L. Kirk Award of the Criminalistics Section (AAFS), August Köhler Award of Illinois State Microscopical Society, the Distinguished Faculty Award at John Jay College, Distinguished Fellow Award of the AAFS, and the Locard Award of the American Society of Trace Evidence Examiners.

2018 EAS Student Awards

Sponsored by Merck & Co., Inc., Kenilworth, NJ

EAS continues to actively support a Student Awards program to recognize students involved in research in the broad field of analytical chemistry. In the spring of each year, we encourage professors to identify undergraduate Juniors in college and graduate students who demonstrate special talent in research. Nomination criteria include excellent grades, appraisals of how the students handle their investigations, their approach and how they resolve problems and publicly disseminate their work. The following outstanding students have been chosen from a very worthy field of candidates:

### UNDERGRADUATE STUDENTS

<table>
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<tr>
<th>Name</th>
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<th>Nominated by</th>
</tr>
</thead>
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<tr>
<td>Jessica Duong</td>
<td>Trinity College</td>
<td>Prof. Michelle Kovari</td>
</tr>
<tr>
<td>Erin Katz</td>
<td>Drexel University</td>
<td>Prof. Peter DeCarlo</td>
</tr>
<tr>
<td>Kaylie Kirkwood</td>
<td>North Carolina State University</td>
<td>Prof. David Muddiman</td>
</tr>
<tr>
<td>Megan Ogorchock</td>
<td>University of North Carolina-Chapel Hill</td>
<td>Prof. Gary Glish</td>
</tr>
<tr>
<td>Emmalyn Dupree</td>
<td>Clarkson University</td>
<td>Prof. Costel Darie</td>
</tr>
<tr>
<td>Marcie Wiggins</td>
<td>University of Delaware</td>
<td>Prof. Karl Booksh</td>
</tr>
</tbody>
</table>

### GRADUATE STUDENTS

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<tr>
<th>Name</th>
<th>Institution</th>
<th>Nominated by</th>
</tr>
</thead>
<tbody>
<tr>
<td>James Keating</td>
<td>University of North Carolina-Chapel Hill</td>
<td>Prof. Gary Glish</td>
</tr>
<tr>
<td>Shachi Mittal</td>
<td>University of Illinois at Urbana-Champaign</td>
<td>Prof. Rohit Bhargava</td>
</tr>
</tbody>
</table>

The Governing Board of the 2018 EAS congratulates these awardees for their outstanding achievements.

The Student Awardees’ posters will be presented on Tuesday, November 13, 2018 in the Poster Area on the Bridge to the Hotel from 11:30AM – 12:15PM
WORKSHOPS

Take advantage of these FREE workshops to improve your job seeking skills!

Monday, November 12, 1:00PM – 3:00PM
Effective Communication Skills for Professionals in Chemistry
Donald Truss, Executive Recruiter
Room 207

Join us as Executive Recruiter Donald Truss guides you through the mysterious world of the interview decision making process. Come and learn the secrets to making the interviewer comfortable and capable of understanding you. Learn how the proper use of patience and timing will increase the probability of receiving an offer of employment. During this interactive session, we discuss how to understand what the interviewer is feeling during the interview, and how you can guide his or her feelings in a way that improves communication. Don’t miss this opportunity to get an insider’s view of the effective processes involved between interviewer and interviewee. Come with an open mind and be prepared to be surprised! Don’t miss this event where you can expand your network, make new friends, share knowledge with your peers, and hear highly relevant and beneficial insights and perspectives from an expert in the employment marketplace.

Tuesday, November 13, 1:00PM – 3:00PM
The Importance of an Impressive Social Profile, Whether You are Looking for Your Next Career Move or Not
Suzanne M. Stingo, SMS Social Media Strategies
Room 207

Whether you are looking for your next career move or looking to connect with more business counter-parts, LinkedIn is where your profile needs to shine! This workshop will help you get your profile be the BEST version of YOU it can be! Be an “All Star” on LinkedIn and learn how to use the platform in all stages of your career!

STUDENT SEMINARS

EAS offers seminars essentially for high school students and teachers and college students. Seminars are included with the college student registration.

Monday, November 12, 10:00AM-12:30PM
Non-Destructive Forensic Examination of Banknotes and Counterfeit Consumer Products
Sponsored by American Microchemical Society
Gene S. Hall, Rutgers University
Room 207

Tuesday, November 13, 10:00AM-12:30PM
Chemical Research at the Interface between Science and Art: Analytical Chemistry and Materials Science at the Metropolitan Museum of Art
Dr. Marco Leona, The Metropolitan Museum of Art
Room 207

Wednesday, November 14, 10:00AM-12:00PM
Forensic Identification: Crime Scene Reconstruction and DNA Analysis
Janine Kishbaugh and Carol Ritter, Cedar Crest College
Room 207
2018 EAS EMPLOYMENT BUREAU

An Employment Bureau is available to provide ample opportunity for employees to meet prospective employers. The Employment Bureau is free to all registered attendees.

The Employment Bureau, located on the 3rd FL, will operate from 9:00 AM until 4:00 PM on Monday and Tuesday. On Wednesday, the hours will be 9:00 AM to 1:00 PM. Job postings will be available for applicant review beginning at 11:00 AM on Monday morning. Interview booths will be available for Employers to schedule interviews. Job postings are continually updated during EAS and applicants are expected to visit the Job Posting bulletin boards on a regular basis.

Back by popular demand!
• All resumes must be submitted in a SEARCHABLE PDF file format. This is to make it easier and faster for employers to find prospective applicants.
• Employers will be given access to EAS’s secure portal to search and review resumes on-line.

Applicant Instructions
• In order for employers to find you faster you must supply the Employment Bureau with a copy of your resume in a searchable PDF file on a FLASH DRIVE or via Email to candidate_cvs@eas.org (paper copies will NOT be accepted). Your resume should be no longer than two (2) pages in length. Your flash drive will be returned to you once the file has been downloaded.
• Postings of current job openings will be available for your review in the Job Posting Area. Access to these postings is offered to all attendees registered for EAS.
• Interested employers will contact you directly via the email address or phone number listed on the resume.

Employer Instructions
• When you arrive at the Employment Bureau, check-in at the Employer Registration desk. Job postings may be submitted on your Company stationery (please include job title, description, location, and contact information) 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. Job postings can be emailed to job_postings@eas.org.
• Resumes of prospective applicants will be available for your review on-line through EAS’s secure portal. Each employer will receive their access code on-site through the Employment Bureau. Access to resumes will be restricted to employers with job openings registered with the Employment Bureau and the portal will close at the end of EAS on Wednesday, November 14. Note: No hard copies of resumes will be printed.

Please Note: Access to the secure portal with all the resumes will be closed down at 5:00 PM on Wednesday, November 21st

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518-387-5882
Special Exhibitor Events

During the 2018 Eastern Analytical Symposium, the following special exhibitor events will take place. For additional information on these events, please contact the relevant exhibiting company.

Agilent Technologies

Agilent Technologies will be conducting instrument demos on Monday, Tuesday, and Wednesday in Room 108 on the first floor. Visit the Agilent demo room to meet get answers to your questions from experts. You’ll also have the opportunity learn more about the latest UV/Vis Spectrophotometry product technology and how it can help your research.

PerkinElmer

PerkinElmer will be presenting the following presentations on Monday, Tuesday, and Wednesday in Room 109 on the first floor:

**Monday:**
- 9:30AM - 10:15AM - *New Fluorescence Capabilities Meeting The Challenges Of A Diverse Range Of Industries And Applications* - Chris Lynch
- 10:30AM - 11:15AM - *Hyphenation: Coupling Thermal and Spectroscopic Technologies to Unlock Material Behavior* - Peter Muller
- 2:00PM - 2:45PM - *IF I can't use a Cuvette, How do I Measure my Sample?..... Advanced UV/VIS/NIR Accessories to Support Difficult Sample Analysis* - Chris Lynch

**Tuesday:**
- 10:00AM - 10:45AM - *Cannabis, Food Allergens, and Wine: How the QSight LC MS/MS can help you analyze samples with the “dirtiest” matrices* - Michael Costanzo
- 1:30PM - 2:15PM - *Volatile Organic Compounds and Semi-Volatile Organic Compounds in a single air analysis* - Tom Mancuso
- 2:15PM - 3:00PM - *Heavy Metals in Cannabis by ICP-MS with Sample Prep* - Lee Davidowski

**Wednesday:**
- 10:00AM - 10:45AM - *Why do my FTIR spectra look so bad?....How to identify and correct poor quality spectra* - Tom Byron
- 1:30PM - 2:15PM - *Know what is in your sample using easy GC Techniques* - Lee Marotta

SCIEX

Monday, November 12, 2018 from 12:30 pm to 2:00 pm in Room 203 on the second floor of the conference center. Knowing Mass Spectrometry from the Inside Out: Why Is It So Beneficial for the Future of Your Lab? You are invited to join us for lunch at the 2018 Eastern Analytical Symposium to learn directly from our product managers all about the innovative Mass Spectrometry solutions that we have developed for your organization to advance research capabilities and product quality compliance.

Shimadzu Scientific Instruments

Shimadzu will be conducting LIVE instrument presentations on Monday, Tuesday, and Wednesday in Stockton B, which is located on the first floor of the conference center near the registration area. Come visit the Shimadzu Suite and see the latest generation instruments being offered by Shimadzu.

Thermo Fisher Scientific

Join Thermo Fisher Scientific in Stockton C for talks and demonstrations on FTIR, Ramen, OES, HPLC, MS, and much more on Monday, Tuesday, and Wednesday. Stockton C is located on the first floor of the conference center.
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