

2018 Preliminary Technical Oral Program

Here is the preliminary list of oral invited and contributed sessions; the E-Poster Sessions are a separate file.

MONDAY MORNING, NOVEMBER 12

Time	Title, Author(s)
EAS Award for Outstanding Achievements in Separation Sciences Honoring Christopher Pohl, Thermo Fisher Scientific Chair: Kannan Srinivasan, Thermo Fisher Scientific	
8:30	Presentation of the EAS Award for Outstanding Achievements in Separation Sciences
8:35	<i>Hyperbranched Anion-Exchange Phases in Ion Chromatography</i> , <u>Christopher Pohl</u> , Charanjit Saini, Thermo Fisher Scientific
9:10	<i>High-Performance Anion Exchange Chromatography and Pulsed Electrochemical Detection: An Ideal Couple for Carbohydrate Analysis</i> , <u>William R. LaCourse</u> , University of Maryland-Baltimore County
9:50	Break
10:10	<i>Open Tubular Capillary Ion/Liquid Chromatography: The Challenges and the Rewards</i> , <u>Purnendu K. Dasgupta</u> , University of Texas-Arlington
10:50	<i>Recent Advances in Suppressor Technology for Ion Chromatography</i> , <u>Kannan Srinivasan</u> , Thermo Fisher Scientific
New York/New Jersey Sections of the Society for Applied Spectroscopy Gold Medal Award Honoring Igor K. Lednev, University of Albany Session Chair: Daniel Sanborn, DP Spectroscopy, Deborah Peru	
8:30	<i>Raman Spectroscopy for Forensic Purposes and Medical Diagnostics</i> , <u>Igor K. Lednev</u> , University of Albany
9:10	<i>T-Jump Resonance and Normal Raman Determination of Reaction Coordinate of Thermoresponsive Hydrogel Volume Phase Transition</i> , <u>Sanford A. Asher</u> , <u>Tsung-Yu Wu</u> , <u>Alyssa B. Zrimsek</u> , <u>Sergei V. Bykov</u> , <u>Ryan S. Jakubek</u> , University of Pittsburgh
9:50	Break
10:10	<i>Applications of Vibrational Optical Activity for the Elucidation of Molecular Stereochemistry</i> , <u>Laurence A. Nafie</u> , Syracuse University
10:50	<i>Forensic Science R&D Programs at the National Institute of Justice: Opportunities for Novel Spectroscopic and Analytical Techniques Applied to Forensic Problems</i> , <u>Gregory Dutton</u> , National Institute of Justice
Challenges Solved by NMR: Diverse Problems and Technologies Chairs: Yongchao Su and Xingyu Lu, Merck & Co.	
8:30	<i>Correlating Structure and Mobility Information to Functional Properties of Pharmaceutical Formulations</i> , <u>Eric J. Munson</u> , Purdue University
8:50	<i>Boron-10 Solid-State NMR: Developments of Techniques for Rapid Spectral Acquisitions and Applications to Disordered Solids</i> , <u>Robert W. Schurko</u> , <u>Lucas D.D. Foster</u> , <u>Adam R. Altenhof</u> , <u>Stanislav L. Veinberg</u> , University of Windsor
9:10	<i>Characterization of Formulated Pharmaceuticals Using Fast MAS 1H Solid-State NMR Spectroscopy</i> , <u>David A. Hirsh</u> , <u>Anuradha V. Wijesekara</u> , <u>Scott L. Carnahan</u> , <u>Aaron J. Rossini</u> , Iowa State University, <u>Joseph W. Lubach</u> , <u>Karthik Nagapudi</u> , Genentech
9:30	<i>High-Resolution Proton-Detected and Multidimensional Solid-State NMR of Pharmaceuticals Utilizing Ultrafast Magic Angle Spinning of 60-111 kHz</i> , <u>Xingyu Lu</u> , <u>Karen C. Thompson</u> , <u>Haichen Nie</u> , <u>Gary E. Martin</u> , <u>R. Thomas Williamson</u> , <u>Wei Xu</u> , <u>Yongchao Su</u> , Merck & Co., <u>Yu Tsutsumi</u> , <u>Jean-Paul Amoureux</u> , Bruker Biospin
9:50	Break
10:10	<i>13C NMR-Based Methodologies for Solving Challenging Stereochemical Problems</i> , <u>Ikenna E. Ndukwe</u> , <u>Andrew Brunskill</u> , <u>Donald R. Gauthier</u> , <u>Yong-Li Zhong</u> , <u>Mikhail Reibarkh</u> , <u>Gary E. Martin</u> , Merck & Co., <u>Yizhou Liu</u> , Pfizer
10:30	<i>Exploring Complex Conformational Dynamics in hDM2 Inhibitor by NMR and DFT</i> , <u>Alexei V. Buevich</u> , Merck & Co.
10:50	<i>From Traditional Small Molecules to Novel Liquid Crystal Formulations in Drug Development: A Solid-State NMR Journey</i> , <u>Anuj Abraham</u> , Bristol-Myers Squibb
11:10	<i>Quantitative NMR Spin-Diffusion and Relaxation Analysis of Inhomogeneous Mixing in Pharmaceutical Amorphous Solid Dispersions on the sub-100-nm Scale</i> , <u>Pu Duan</u> , <u>Klaus Schmidt-Rohr</u> , Brandeis University, <u>Yongchao Su</u> , <u>Matthew S. Lamm</u> , <u>Wei Xu</u> , <u>Fengyuan Yang</u> , Merck & Co.

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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	
8:30	<i>Opioid Analytical Challenges Facing the Drug Enforcement Administration, <u>Mark Filandro</u>, United States Drug Enforcement Administration</i>
9:10	<i>Challenges and Insights in LC-MS-MS and LC-TOF-MS Analysis of Isobaric Compounds in the Opioid Class, <u>Michael E. Lamb</u>, Donna M. Papsun, Barry K. Logan, NMS Labs</i>
9:50	Break
10:10	<i>Analysis of Novel Opioids using a Direct Analysis in Real Time (DART) Equipped Mass Spectrometer, <u>Brian Musselman</u>, Frederick Li, IonSense, Paul Kennedy, Chris Snyder, Mishka Repaska, Cayman Chemical, Stephen Shrader, Shrader Software Solutions</i>
10:50	<i>The Growing Phenomenon of the Epidemic of Synthetic Opioids and Forensic Science: Impact and Response, <u>Erin Worrell</u>, Cuyahoga County Medical Examiner</i>

Stability Indicating Method Development and Forced Degradation Experimental Approaches Chair: David Schenk, Merck & Co.	
8:30	<i>The Foundational Role of Forced Degradation in Stability-Indicating Method Development: Potential Pitfalls, <u>Steven W. Baertschi</u>, Baertschi Consulting</i>
9:10	<i>Accelerated Degradation of Pharmaceuticals in Leidenfrost Droplets and its Potential, <u>Yangjie Li</u>, R. Graham Cooks, Purdue University, <u>Yong Liu</u>, Hong Gao, Roy Helmy, W. Peter Wuelfing, Merck & Co., Christopher J. Welch, Welch Innovation, LLC</i>
9:50	Break
10:10	<i>Method Specificity: Forced Degradation Study Justifications from an Established Products Perspective, <u>Neal Adams</u>, Pfizer</i>
10:50	<i>Perspectives on ANVISA's RDC 53 Forced Degradation Requirements, <u>Leonardo Allain</u>, Merck & Co.</i>

Analytical Techniques for Elemental Analysis of Solids Chair: Lydia Breckenridge, Bristol-Myers Squibb	
8:30	<i>Laser-Ablation Laser-Induced Fluorescence Spectroscopy in a Difficult Matrix, <u>Jonathan Merten</u>, Chris P. Jones, Patrick D. Tribbett, Anna G. Anders, Arkansas State University Jonesboro</i>
9:10	<i>Overcoming Matrix Challenges in XRF, <u>Sharla Wood</u>, Bristol-Myers Squibb</i>
9:50	Break
10:10	<i>Laser-Induced Breakdown Spectroscopy as a Tool for Rapid Elemental Bioanalysis, <u>Steven J. Rehse</u>, Alexandra Paulick, Christopher Heath, Robert Valente, Paul Dubovan, Kevin Beaugrand, Mark Armstrong, Doris Rusu, University of Windsor</i>
10:50	<i>Leveraging Laser Ablation-ICP-MS for Pharmaceutical Analysis, <u>Lydia Breckenridge</u>, Bristol-Myers Squibb</i>

Unique Innovations with Mass Spectral Detection Chair: Mary Lynn Grayeski, Marywood University	
8:30	<i>Capture of Electrochemically-Generated Fleeting Carbazolium Radical Cations and Elucidation of Carbazole Dimerization Mechanism by Mass Spectrometry, <u>Hao Chen</u>, Ohio University</i>
8:50	<i>Identification of Ortho-Substituted Benzoic Acid/Ester Derivatives via the Gas-Phase Neighboring Group Participation Effect in (+)-ESI High Resolution Mass Spectrometry, <u>Huaming Sheng</u>, Merck</i>
9:10	<i>High-Throughput Analysis: Where Mass Spectrometry Fits, <u>Jessica Lin</u>, Colin Masui, Kelly Zhang, Genentech</i>
9:30	<i>Opportunities for Method Development by Using Various Mass Spectrometric Ionization Techniques, <u>Norman H. Chiu</u>, University of North Carolina-Greensboro</i>
9:50	Break
10:10	<i>High-Throughput Ion Mobility Mass Spectrometry Sequencing of Cyclic Peptides Mediated Through Oxazolidinone Ring Opening, <u>Ryan D. Cohen</u>, Merck & Co., Hader E. Elashal, Heidi E. Elashal, Seton Hall University, Monika Raj, Auburn University</i>
10:30	<i>Glass or Plastic? The Challenges and Solutions of Analyzing Mercury by ICP, <u>James A. King Jr.</u>, Inorganic Ventures</i>
10:50	<i>Native N-Linked Glycan Analysis by High-Performance Anion-Exchange Chromatography with Pulsed Amperometric Detection (HPAE-PAD) and Mass Spectrometry, <u>Parul Angrish</u>, Yongjing Chen, Zoltan Szabo, Jim Thayer, Yan Liu, Thermo Fisher Scientific</i>
11:10	<i>Analysis of Vanilla Extract by the Molecular Ionization Desorption Analysis Source for Mass Spectrometry, <u>Ciara N. Pitman</u>, Joshua A. Wilhide, William R. LaCourse, University of Maryland-Baltimore County</i>

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Finished Product Automation: Enabling the Products of the Future through Automation Chairs: Ed Mularz, Roy Helmy, Merck & Co.	
8:30	<i>Application of Computer Vision and Robotics for Lab Automation</i> , <u>Janakiraman Gopinath</u> , Prashant Shah, Merck & Co.
9:10	<i>Automated Design of Experiments: A Multivariate Approach to TPW Method Optimization</i> , <u>C. J. Moynihan</u> , Sotax Corp.
9:50	Break
10:10	<i>Automated Sample Preparation Directly from Closed Sterile Finished Pharmaceutical Product Vials</i> , <u>Orane White</u> , William Stevens, Edward Mularz, Merck & Co.
10:50	<i>Automated Capabilities for Complex Material Handling within Analytical Testing</i> , <u>Paul DiGregorio</u> , Chemspeed

MONDAY AFTERNOON, NOVEMBER 12

Time	Title, Author(s)
EAS Young Investigator Award Sponsored by The Dow Chemical Company Honoring Kerri A. Pratt, University of Michigan Chair: Kimberly Prather, University of CA-San Diego	
1:00	<i>New Insights into Marine Aerosols by Mass Spectrometry</i> , <u>Kimberly Prather</u> , University of CA-San Diego
1:40	<i>Nanoparticles in the Air We Breathe: Pristine or Polluted?</i> , <u>Murray Johnston</u> , University of Delaware
2:20	Break
2:40	<i>Widening the Window for Environmental Analysis: On-Line HPLC Monitored by 21 Tesla Fourier Transform Ion Cyclotron Resonance Mass Spectrometry</i> , <u>Allan Marshall</u> , Florida State University
3:20	Presentation of the EAS Young Investigator Award
3:25	<i>Advances in Atmospheric Halogen Chemistry by Chemical Ionization Mass Spectrometry</i> , <u>Kerri A. Pratt</u> , Siyuan Wang, Stephen McNamara, University of Michigan, Angela Raso, Kyle Custard, Paul Shepson, Purdue University

Recent Advances in Green Analytical Chemistry Chair: Joe P. Foley, Drexel University	
1:00	<i>Introduction to and Overview of Green Analytical Chemistry</i> , <u>Joe Foley</u> , Drexel University
1:40	<i>Recent Developments on Solid Phase Microextraction, a Green Sample Preparation Tool for On-Site, In-Vivo, and Complex Matrices Analysis</i> , <u>Nathaly Reyes-Garcés</u> , Janusz Pawliszyn, University of Waterloo
2:20	Break
2:40	<i>Greenness through Modernized Separation Methods: Introduction of the Analytical Method Greenness Score (AMGS) Calculator for Greener Methods</i> , <u>Michael B. Hicks</u> , Lauren Weisel, Merck & Co., William Farrell, Christine Aurigemma, Pfizer, Laurent Lehman, Bristol-Myers Squibb, Kelly Nadeau, Amgen, Heewon Lee, Boehringer-Ingelheim, Carol Moraff-Gingsburg, Novartis, Mengling Wong, Genentech, Paul Ferguson, AstraZeneca
3:20	<i>Greener Process Characterization of Biotherapeutics Using the Multi-Attribute Method</i> , <u>Bhumit Patel</u> , Yi Wang, Mark Brower, Yan-Hui Liu, Douglas Richardson, Merck & Co.

The Role of Chirality in the Pharmaceutical Industry Chair: Nelu Grinberg, Grinberg Consulting	
1:00	<i>Ultra-Fast Chiral Separation for High-Throughput Enantiopurity Analysis</i> , <u>Gregory F. Pirrone</u> , 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	<i>Circular Dichroism Spectroscopy as a Tool to Solve Complex Stereochemical Problems in the Pharmaceutical Industry</i> , <u>Leo A. Joyce</u> , Merck & Co.
2:20	Break
2:40	<i>Insights on Chiral Recognition for Enantiomeric Separation on Teicoplanin Columns</i> , <u>Ling Wu</u> , Nina Gonella, Heewon Lee, Boehringer Ingelheim Pharmaceuticals, Nelu Grinberg, Grinberg Consulting, Shengli Ma, Genentech, Sherry Shen, United States Food & Drug Administration, David S. Bell, Restek Corporation
3:20	<i>Mechanistic Aspects of Chiral Discrimination with Sulfated beta Cyclodextrin</i> , <u>Nelu Grinberg</u> , Grinberg Consulting, Ling Wu, Nizar Haddad, Boehringer Ingelheim Pharmaceuticals

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Monday Afternoon continued

New Tools in Solution NMR Spectroscopy Chair: Alexander Marchione, Chemours Fluoroproducts Analytical	
1:00	<i>Emerging Methods in ¹⁹F-NMR to Characterize Proteins and Small Molecules</i> , <u>Haribabu Arthanari</u> , Harvard Medical School
1:40	<i>Nonuniform Sampling for Sensitivity Enhancement in Multidimensional NMR</i> , <u>Jeffrey C. Hoch</u> , University of Connecticut Health
2:20	Break
2:40	<i>Fast NMR Techniques for Structure Elucidation of Small Molecules</i> , <u>Eriks Kupce</u> , Bruker BioSpin
3:20	<i>Advanced NMR Techniques for Challenging Structural Assignment Problems</i> , <u>Gary Martin</u> , Seton Hall University

Managing Your Lab Resources, Internal and External Chairs: Dennis Swijter, ALMA	
1:00	<i>Perspectives in Managing Analytical Activities in an all Outsourced and Global Pharma Model</i> , <u>Shirley Rodriguez</u> , Shire
1:40	<i>Lessons Learned from Managing Outsourcing of Analytical Development and Testing</i> , <u>Qiaoching Li</u> , Celgene
2:20	Break
2:40	<i>Maximizing Effectiveness when Working with an External Contract Laboratory</i> , <u>Jonathan Chun</u> , Alliance Technologies
3:20	<i>The Simplest, Most Effective, and Least Expensive Lab Safety Program</i> , <u>James A. Kaufman</u> , Laboratory Safety Institute

Impact of New Regulatory Expectations to Drug Development in Pharmaceutical Industry Chairs: Kim Huynh-Ba, Pharmalytik and Karen Lucas, J&J Janssen	
1:00	<i>The Evolving Global Regulatory Environment - Strategic Considerations</i> , <u>Kimberly Belsky</u> , Mallinkrodt Pharmaceutical
1:40	<i>Stability Compliance for Combi-Products - A Medical Device Perspective</i> , <u>Laure Larkin</u> , Ethicon, Inc.
2:20	Break
2:40	<i>Regulatory Expectations in the GMP Pharmaceutical Laboratory</i> , <u>Gayle S. Lawson</u> , United States Food & Drug Administration
3:20	<i>Drug Development Strategies to Meet New Regulatory Expectations - Recent Case Studies on API Form, Elemental Impurities and Mutagenic Impurities Controls</i> , <u>Yan Wu</u> , Lisa Wright, Merck & Co.

Advanced Solutions in the Analysis of Forensic Samples Chair: Pauline Leary, Smiths Detection	
1:00	<i>Forensic Application of Attenuated Total Reflection Fourier Transform-Infrared (ATR FT-IR) Spectroscopy for Bloodstain Analysis</i> , <u>Ewelina M. Mistek</u> , Igor K. Lednev, University at Albany, SUNY
1:20	<i>The Detection of Organic Gunshot Residue Using Raman Spectroscopy and Fluorescence</i> , <u>Shelby R. Khandasammy</u> , Igor K. Lednev, University at Albany, SUNY, <u>Alex Rzhevskii</u> , Thermo Fisher Scientific
1:40	<i>Raman Spectroscopy for Forensic Bloodstain Identification: Method Validation vs. Environmental Interferences</i> , <u>Robert B. Rosenblatt</u> , Kyle C. Doty, Lenka Halámková, Igor K. Lednev, University at Albany
2:00	<i>Universal Detection of Body Fluid Traces In-Situ with Raman Hyperspectroscopy for Forensic Purposes</i> , <u>Marisia Fikiet</u> , Gregory Mclaughlin, Igor Lednev, University at Albany, <u>Masahiro Ando</u> , Hiro-o Hamaguchi, Spectroscopic Science Laboratory
2:20	Break
2:40	<i>Blood Alcohol and Inhalant Analysis by Gas Chromatography - Vacuum Ultraviolet Spectroscopy</i> , <u>James A Diekmann III</u> , Jack Cochran, VUV Analytics
3:00	<i>Solid Phase Microextraction-DART-MS Screening for Controlled Dangerous Substances in Complex Matrices</i> , <u>Eileen Eubank</u> , Janelle Newman, Jeremy Zehr, Joseph Trimboli, MRIGlobal
3:20	<i>Evaluating Practical Uses of Molecular Isotopic Engineering (MIE): Authenticity, Security, and Intellectual Property Considerations</i> , <u>John P. Jasper</u> , Molecular Isotope Technologies LLC, Peter Farina, Canaan Partners, Ann Pearson, Harvard University, Peter S. Mezes, Mezes Consulting, Anthony D. Sabatelli, Dilworth IP, LLC
3:40	<i>Confirmatory Method Optimization for the Analysis of Thirty Fentanyl Analogues via Gas Chromatography-Mass Spectrometry</i> , <u>Delilah DeWilde</u> , Thomas Brettell, Thomas Pritchett, Cedar Crest College, Matthew Wood, Ocean County Sheriff's Department

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60th Anniversary of SAS: Advancing Spectroscopy from Foundation to Future, organized by NY/NJ SAS Chair: John Wasylyk, Bristol-Myers Squibb	
1:00	<i>Another Diamond Anniversary - Diamond Optics for Infrared Spectroscopy Applications</i> , <u>David W. Schiering</u> , Czitek, John A. Reffner, John Jay College of Criminal Justice
1:40	<i>Fifty Years of NMR Spectroscopy and Forty Years of SAS</i> , <u>Cecil Dybowski</u> , University of Delaware
2:20	Break
2:40	<i>Applying Vibration Spectroscopy in Usual and Unusual Ways in the Pharmaceutical Industry</i> , <u>John Wasylyk</u> , Bristol-Myers Squibb
3:20	<i>NYSAS Celebrates 60+ Years of Scientific Collaboration and Discusses the Impact of Chemometrics on the Evolution of Raman Instrumentation</i> , <u>Deborah Peru</u> , DP Spectroscopy & Training, Howard Mark, Mark Electronics, Fran Adar, Horiba Scientific,

Bioanalysis: Proteins, Peptides and Lipid Bilayers Chair: Nathan Wittenberg, Lehigh University	
1:00	<i>Kinetic-Equilibria Modeling Strategies for Lab-on-a-Molecule Probes</i> , <u>Fereshteh Emami</u> , Southeastern Louisiana University
1:20	<i>Immunoaffinity Capillary Electrophoresis for the Determination of Protein Biomarkers of Disease in Biological Fluids. Maximizing Benefits and Minimizing Harm</i> , <u>Norberto A. Guzman</u> , Princeton Biochemicals
1:40	<i>Optimizing HPLC Separation Performance for Peptides and Other Mid-Size Molecules</i> , <u>Richard A. Henry</u> , Independent Consultant, Justin M. Godinho, Joseph J. DeStefano, Advanced Materials Technology
2:00	<i>Effects of Photosensitized Lipid Oxidation on Supported Lipid Bilayer Formation and Structure</i> , <u>Nathan Wittenberg</u> , Ashley Baxter, Michael Farley, Joseph Saba, Lehigh University

Innovative Approaches to Antibody Analysis Chair: Nathan Wittenberg, Lehigh University	
2:40	<i>A Generic mAb Subunit LC-MS Assay for In-Vivo Drug-to-Antibody Ratio and ADC Concentration Determination in Pre-Clinical Studies</i> , <u>John F. Kellie</u> , GlaxoSmithKline
3:00	<i>Electro-Flow Asymmetric Field Flow Fractionation Characterization of the NIST Monoclonal Antibody Standard RM 8671</i> , <u>Robert Reed</u> , Soheyl Tadjiki, Thorsten Klein, Postnova Analytics Inc.
3:20	<i>Bead-Extraction and Heat-Dissociation (BEHD): A Novel Way to Overcome Drug and Matrix Interference for Small Biotherapeutic Modality such as Domain Antibody</i> , <u>Weifeng Xu</u> , Michael Sank, Renuka Pillutla, Bristol-Myers Squibb
3:40	<i>Multiplexed Residual Process Impurity Monitoring in Antibody-Drug Conjugates by Charged Aerosol Detection</i> , <u>Steven Chin</u> , Tao Chen, Genentech

KEYNOTE LECTURE

Monday, November 12, 4:15pm

Green Chemistry: The Missing Elements

John Warner, Warner Babcock Institute for Green Chemistry

All registered Conferees, Attendees and Exhibitors are invited to attend.
A reception will be held immediately following the lecture.

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TUESDAY MORNING, NOVEMBER 13

BREAKFAST LECTURE

Tuesday, November 13, 7:30am

Making the Case for Multidimensional Liquid Chromatography in the Search for Biomarkers
Mark Schure, Theoretical Separation Science Laboratory

All registered Symposium & Exposition Conferees and Full-Time Student Conferees are invited to attend the Breakfast Lecture. A light breakfast will be provided.

Time	Title, Author(s)
EAS Award for Outstanding Achievements in Mass Spectrometry Sponsored by Agilent Technologies Honoring Yinsheng Wang, University of California-Riverside Chair: Qibin Zhang, University of North Carolina-Greensboro	
8:30	Presentation of the EAS Award for Outstanding Achievements in Mass Spectrometry
8:35	<i>Quantitative Proteomic Approaches for Interrogating Nucleic Acid- and Nucleotide-Binding Proteins</i> , Yinsheng Wang, University of California-Riverside
9:10	<i>Quantification of Protein Post-Translational Modifications Using Stable Isotope and Mass Spectrometry</i> , Grace Xinzhaoh Jiang, Amgen Inc.
9:50	Break
10:10	<i>Applications of Mass Spectrometry in Biologics Drug Discovery and Development</i> , Xiao Yongsheng, Shire Pharmaceuticals
10:50	<i>Novel Approaches toward Analysis of Glycolipids</i> , Qibin Zhang, University of North Carolina-Greensboro

EAS Award for Outstanding Achievements in Vibrational Spectroscopy Honoring Stephen P. Cramer, University of California-Davis Sponsored by the American Microchemical Society Chair: Bruce Hudson, Syracuse University	
8:30	<i>Biomedical Applications of SERS: Diagnostics, Metabolomics, Forensics</i> , Lawrence Ziegler, Boston University
9:10	<i>Real-Time and Nanoscale Infrared Imaging in the Biosciences</i> , Lisa M. Miller, Brookhaven National Laboratory
9:50	Presentation of the EAS Award for Outstanding Achievements in Vibrational Spectroscopy
9:55	Break
10:10	<i>Vibrational Inelastic Neutron Scattering</i> , Bruce Hudson, Syracuse University
10:55	<i>Vibrational Spectroscopy of Hydrogen-Processing Enzymes Using Mössbauer Photons - Why the Fuss About Little Bumps and Squiggles?</i> , Stephen P. Cramer, University of California-Davis

American Microchemical Society Benedetti-Pichler Award Honoring Ryan C. Bailey, University of Michigan Session Chair: Robert Vetrecin	
8:30	<i>Microscale Tools for Precision Medicine</i> , Ryan Bailey, University of Michigan
9:10	<i>Miniaturized Devices for the Analysis of Biomolecules Linked to Diseases</i> , Adam T. Woolley, Brigham Young University
9:50	Break
10:10	<i>Plasmonic Nanobiosensors: From Therapeutic Drug and Environmental Monitoring to Optophysiology of Living Cells</i> , Jean-Francois Masson, University of Montreal
10:50	<i>Rapid Dialysis-based Binding Measurements with 3D-Printed Integrated Membranes</i> , Dana Spence, Cody Pinger, Andre Castiaux, Michigan State University

Research from our Emerging Forensic Scientists, sponsored by New Jersey Association of Forensic Scientists Chair: Peter Diaczuk, Pedico Research Institute	
8:30	<i>Mass Spectrometry Study of Organic Gunshot Residue</i> , Jillian Mizak, Monica Joshi, West Chester University of Pennsylvania
9:10	<i>The Prevalence of Male DNA Under a Female's Fingernails</i> , Alexis Baxter, Janine Kishbaugh, Cedar Crest College
9:50	Break
10:10	<i>The Stability of Synthetic Cathinones of Toxicological Interest</i> , Lexus R. Rutter, Karen S. Scott, Arcadia University, Heather L. Ciallella, Rutgers University
10:50	<i>Role of Insects in Human Identity</i> , Shayna L. Gray, Scott Lindner, Reena Roy, Pennsylvania State University

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Solid State NMR Studies of Disordered Systems	
Chairs: Dewey Barich, GlaxoSmithKline, Sophia Hayes, Washington University	
8:30	<i>Dynamic Disorder in Regulation of HIV-1 Maturation by Integrating Solid State NMR, cryo-EM, and MD, Caitlin M. Quinn, Mingzhang Wang, Huilan 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</i>
9:10	<i>Characterization of Amorphous Pharmaceutical Solids Using NMR Spectroscopy, Joe Lubach, Genentech</i>
9:50	Break
10:10	<i>High-Field Solid-State NMR of Disordered Solids, Dinu Iuga, University of Warwick</i>
10:50	<i>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. Keszler, Oregon State University</i>

Analytical Solutions to Challenges in Impurity Testing	
Chair: Isabelle Vu Trieu, Waters Corp.	
8:30	<i>Analytical Solutions to Challenges in Headspace-GC/MS Analysis of Volatile Extractable and Leachable Compounds, Xiaoteng Gong, Dajuan Lu, Danny Hower, SGS North America Inc.</i>
8:50	<i>An In-Depth Look at Osmium Characterization and Impurity Determination by ICP, Thomas J. Kozikowski, Inorganic Ventures</i>
9:10	<i>Characterization of Non-Compendial Reference Standards for Impurities: How Good is Good Enough?, Bernard A. Olsen, Olsen Pharmaceutical Consulting, Christian Zeine, Jens Boertz, LGC Standards</i>
9:30	<i>External Reference Standards or Relative Response Factors: Considerations for Quantitation of Impurities in Pharmaceuticals, Bernard A. Olsen, Olsen Pharmaceutical Consulting, Christian Zeine, Jens Boertz, LGC Standards</i>
9:50	Break
10:10	<i>Using Wavelength-Dispersive X-Ray Fluorescence (WD-XRF) as a Walkup, High-throughput Alternative to Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES) for R&D Pharmaceutical Elemental Impurity Applications, Tiffany M. Brucker, Eric J. Borsje, Henrik T. Rasmussen, Vertex Pharmaceuticals</i>
10:30	<i>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 & Co.</i>
10:50	<i>Application of LC-MS-MS to Study the Photodegradation of Phthalates: Kinetics and Intermediate Degradation Products, Xiaofei Lu, Yuegang Zuo, University of Massachusetts Dartmouth</i>

New Developments and Applications of Multidimensional Chromatography	
Chair: Xiaohua Zhang, Merck & Co.	
8:30	<i>Recent Advances of Multidimensional HPLC: Beyond Peak Capacity and Orthogonality, Kelly Zhang, Jessica Lin, Sam Yang, Midco Tsang, Genentech</i>
9:10	<i>Applications and Method Development of 2D-LC for Small Molecule Pharmaceutical Analysis, Pankaj Aggarwal, David T. Fortin, Angel R. Diaz, Pfizer</i>
9:50	Break
10:10	<i>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, Ben Madigan, Gabriel Leme, Gustavus Adolphus College, Gregory Staples, Agilent Technologies</i>
10:50	<i>Adding Mass Detection to a USP Method Using Heart-Cutting Multi-Dimensional Liquid Chromatography, Margaret Maziarz, Claude Mallet, Paul Rainville, Mark Wrona, Waters Corp.</i>

Better Raman Spectroscopy through Chemometrics	
Chair: Jim Rydzak, Specere Consulting	
8:30	<i>Understanding the Depth Response Profile of Transmission Raman Spectroscopy of Diffusely Scattering Media, Jun Zhao, B&W Tek</i>
8:50	<i>Raman Hyperspectroscopy and Advanced Statistical Analysis: A Novel Universal Method for Disease Diagnostics, Nicole M. Rabovsky, Lenka Halamkova, Igor K. Lednev, University at Albany, SUNY</i>
9:10	<i>Machine Learning Algorithms Applied to Raman Spectroscopic Data, Lenka Halamkova, Igor K. Lednev, University at Albany, SUNY</i>
9:30	<i>Iterative Target Detection for Detection and Classification with an Application in Hyperspectral Imaging, Neal B. Gallagher, Eigenvector Research</i>
9:50	Break

2018 Preliminary Technical Oral Program

Tuesday Morning continued

PAT: Having Eyes in the Process Chair: Jim Rydzak, Specere Consulting	
10:10	<i>Near Infrared Solutions for Biopharmaceutical Development and Manufacturing</i> , <u>Adam Hopkins</u> , Mackenzie Speer, Metrohm USA
10:30	<i>Drug Polymorphous Analysis Using Raman and NIR Spectroscopic Techniques: an Application in HME Process Optimization and Real-Time Monitoring</i> , Herman He, Mohammed Ibrahim, Rui Chen, Thermo Fisher Scientific, Jiayang Zhang, Michael Repka, University of Mississippi
10:50	<i>NIR Spectroscopy for Endpoint Analysis in Blending Operations</i> , <u>Edward Gooding</u> , Viavi Solutions, Brad Swarbrick, Quality by Design Consultancy
11:10	<i>Autonomous Spectroscopy for Process Monitoring</i> , <u>Brian G. Rohrback</u> , Infometrix, Inc.

New Developments in GC Analysis Capabilities Chair: Brooke Kamrath, University of New Haven & Michelle Gallagher, Dow Chemical Company	
8:30	<i>Ghost Peaks and Artfactually Increased Impurity Peaks in Both Direct Injection and Headspace GC Analyses due to Thermo Lability of Analytes and/or a Common Sample Diluent</i> , <u>Min Li</u> , Huahai US Inc.
8:50	<i>Development of New Products and Odor Problem Solving Using Gas Chromatography-Mass Spectrometry-Olfactometry Analysis</i> , <u>Michelle Gallagher</u> , Elizabeth Snow, Jim DeFelippis, Jim Bohling, Paul Doll, Melissa Leach, Dow Chemical Company
9:10	<i>GC Inlet Liner Selection for Split and Splitless Analyses</i> , <u>Linx K. Waclaski</u> , Restek Corp.
9:30	<i>Boost Productivity and Laboratory Efficiency for VOCs Analysis in Water and Soil by Advanced Purge & Trap Gas Chromatography-Mass Spectrometry (P&T-GC-MS) Technology</i> , <u>Carlos F. Garcia</u> , Tim Anderson, Lori Dolata, Daniela Cavagnino, Thermo Fisher Scientific, Amy S. Nutter, Jacob Rebholz, Tammy J. Rellar, Teledyne Tekmar
9:50	Break

Nano Infrared Development Chair: Brooke Kamrath, University of New Haven & Andrew Koutrakos, Thor Specialties	
10:10	<i>Non-Contact Submicron Spatial Resolution IR Spectroscopy and Imaging of Pharmaceutical Samples</i> , <u>Curtis Marcott</u> , Light Light Solutions, Eoghan Dillon, Debra Cook, Craig Prater, Photothermal Spectroscopy Corp, Neil Lewis, Independent Consultant
10:30	<i>Non-Contact Sub-Micron Infrared Spectroscopy Using Visible Probe Detection</i> , <u>Eoghan Dillon</u> , Craig Prater, Photothermal Spectroscopy Corp., Curtis Marcott, Light Light Solutions
10:50	<i>Examining Performance of Confocal Raman Microscope Using Nanocarbon Materials</i> , <u>Alexander Rzhetskii</u> , Thermo Fisher Scientific
11:10	<i>Dynamic Fluorescence Measurements of Rose Bengal Photooxidation</i> , <u>Yinan Zhang</u> , Sharon L. Neal, University of Delaware

Surface Analyses for Cultural Heritage I, organized by the New York Conservation Foundation Chair: Bart Devolder, Princeton University Art Museum	
8:30	<i>Old Museum Collections as a Source for New Chemical Analyses</i> , <u>Jennifer A. Loughmiller-Cardinal</u> , Igor Lednev, University at Albany
9:10	<i>Investigation of Painted Decorations and Soluble Nylon Coating on Japanese Sugito at the Philadelphia Museum of Art</i> , <u>Georgia A. Arbuckle-Keil</u> , Rutgers University, Beth A. Price, Kate Duffy, Matthew Dustin, Peggy Olley, Katie Shulman, Wei Kao, Felice Fischer, Philadelphia Museum of Art
9:50	Break
10:10	<i>Spectroscopic and Diffraction Analysis of Verdigris Pigment & Alteration Products on Organic Substrates (Paper and Gum Arabic)</i> , <u>Marcie B. Wiggins</u> , Emma Heath, Karl S. Booksh, Jocelyn Alcantara-Garcia, University of Delaware
10:50	<i>Egg as a Medium in Ancient Mycenaean, Greek and Roman Painting</i> , <u>Norman Muller</u> , retired Princeton University Art Museum

Program continues on next page

2018 Preliminary Technical Oral Program

TUESDAY AFTERNOON, NOVEMBER 13

Time	Title, Author(s)
EAS Award for Outstanding Achievements in Magnetic Resonance <i>Sponsored by Bruker BioSpin and New Era Enterprises</i> Honoring Clare P. Grey, University of Cambridge Chair: Sophia E. Hayes, Washington University	
1:00	<i>A Rewarding Journey into the Disordered World of Ion Conductors</i> , <u>Yan-Yan Hu</u> , Po-Hsiu Chien, Xuyong Feng, Jin Zheng, Florida State University
1:40	<i>Capturing and Quantifying Functional Dynamics in Viral Assemblies - Atomistic View from NMR, MD, and QM-MM</i> , <u>Tatyana Polenova</u> , Caitlin M. Quinn, Mingzhang Wang, Manman Lu, Juan Perilla, University of Delaware, Angela M. Gronenborn, University of Pittsburgh
2:20	Break
2:40	<i>NMR Studies of Paramagnetic Materials: Structure-Activity Relationships in High Energy Li-Ion Cathodes</i> , <u>Fulya Dogan</u> , Argonne National Laboratory
3:20	Presentation of the EAS Award for Outstanding Achievements in Magnetic Resonance
3:25	<i>Developing and Applying New Tools to Understand How Materials for Li and "Beyond-Li" Battery Technologies Function</i> , <u>Clare P. Grey</u> , University of Cambridge

The Current and Future Role of HILIC in the Separation World Chair: Fabrice Gritti, Waters Corp.	
1:00	<i>Hydration of Counterions Plays a Major Role in Retention and Selectivity in Hydrophilic Interaction Chromatography</i> , <u>Andrew J. Alpert</u> , PolyLC Inc.
1:40	<i>Hydrophilic Interaction Chromatography: What are Its Advantages and Limitations?</i> , <u>David V. McCalley</u> , University of the West of England- Bristol
2:20	Break
2:40	<i>Surface Chemistry Considerations in HILIC: Their Impact on Solvent Dynamics and Retention Mechanisms</i> , <u>David S. Bell</u> , Restek Corp.
3:20	<i>Evaluation of New HILIC Columns for Pharmaceutical Analysis: Successes and Challenges</i> , <u>Zachary Breitbach</u> , AbbeVie

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	<i>Examining Elemental Analysis by SEM/EDS in Forensic Paint Comparisons</i> , <u>Ethan Groves</u> , Christopher S. Palenik, Microtrace LLC
1:40	<i>The Analysis of Dyed Beaver Furs Using Transmission and Fluorescence Micro-Spectrophotometry</i> , <u>Frani Kammerman</u> , Mircea A. Comanescu, Tiffany J. Millett, John Jay College of Criminal Justice
2:20	Break
2:40	<i>Microscopy as a Tool in Environmental, Health, and Safety Investigations</i> , <u>Andrew Havics</u> , pH2, LLC
3:20	<i>Screen Shot</i> , <u>Peter Diaczuk</u> , Xiao Shan Law, Pedico Research Institute

Analytical Solutions to the Worlds Problems Chair: Brian Eitzer, The Connecticut Agricultural Experiment Station	
1:00	<i>Wastewater-Based Monitoring of Community Health and Behavior</i> , <u>Kevin J. Bisceglia</u> , Hofstra University
1:40	<i>Analytical Solutions to Regulatory and Other Monitoring Problems</i> , <u>Steven Lehotay</u> , United States Department of Agriculture
2:20	Break
2:40	<i>Air Quality Monitoring in Nairobi</i> , <u>Priyanka de Souza</u> , Senseable City Lab
3:20	<i>Analytical Challenges in Studies of Pesticides and Pollinators</i> , <u>Brian Eitzer</u> , Kimberly Stoner, Richard Cowles, The Connecticut Agricultural Experiment Station

Modern Advances in Gas Chromatography, sponsored by the Chromatography Forum of the Delaware Valley Chair: Marcelo Filgueira, Dow Chemical Company	
1:00	<i>Bridging the Gaps between Comprehensive Multidimensional Separation Techniques</i> , <u>Tadeusz Gorecki</u> , Hei-Yin Chow, Alshymaa A. Aly, University of Waterloo
1:40	<i>Analysis of Stem Cells by Comprehensive Two-Dimensional Gas Chromatography/Time-of-Flight Mass Spectrometry</i> , <u>John Dimandja</u> , Georgia Institute of Technology
2:20	Break
2:40	<i>Adsorption Chromatography with New Intuvo GC Platform</i> , <u>Peilin Yang</u> , Jim Luon, Ronda Gras, Yujuan Hua, Dow Chemical Company
3:20	<i>Improving Accuracy and Repeatability with Single Injection MS/Polyarc Split for E/L and VOC Analyses</i> , <u>Andrew J. Jones</u> , Activated Research Company

2018 Preliminary Technical Oral Program

Tuesday Afternoon continued

Pharmaceutical Drug Product Quality Chair: Leonel Santos, United States Pharmacopeia	
1:00	<i>Public Standards for Radioactive Drugs</i> , <u>Steve Zigler</u> , PETNET Solutions, Ravi Ravichandran, United States Pharmacopeial Convention
1:40	<i>Impact of a Packaging System on Drug Quality and USP's Effort to Revise its Packaging Standards</i> , <u>Desmond Hunt</u> , United States Pharmacopeia
2:20	Break
2:40	<i>Over-the-Counter Drug Product Standard – USP Initiatives</i> , <u>Sujatha Ramakrishna</u> , United States Pharmacopeia
3:20	<i>Over-the-Counter Drug Product Standard – Industry Initiatives</i> , <u>Kylen Whitaker</u> , The Procter and Gamble Co.

Spectroscopy Hits the Clinic, organized by The Coblentz Society Chair: Brandye Smith-Goettler, Merck & Co.	
1:00	<i>Surgical Engineering Enables Intravital Imaging of Mechanisms of Metastasis in Primary and Secondary Sites</i> , <u>David Entenberg</u> , Einstein College of Medicine
1:40	<i>Chemical Imaging with a Quantum Cascade Laser for Rapid Cancer Assessment</i> , <u>Rohit Bhargava</u> , Kevin Yeh, Shachi Mittal, University of Illinois at Urbana-Champaign
2:20	Break
2:40	<i>Mid-Infrared Spectroscopic Imaging and Its Biomedical Applications</i> , <u>Rohith Reddy</u> , Shihao Ran, University of Houston
3:20	<i>Noninvasive In-Vivo Peripheral Vascular Spectrometry: And the Beat goes on</i> , <u>Joseph Chaiken</u> , Seth 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 Steinmann, James Mostrom, Crouse Hospital, Bin Deng, Massachusetts General Hospital Harvard Medical School

Advances in Mass Spectrometric Analysis, organized by the NJ Mass Spectrometry Discussion Group Chair: Long Yuan, Bristol-Myers Squibb	
1:00	<i>High Resolution Mass Spectrometry Bioanalysis</i> , <u>Qin Ji</u> , Bristol-Myers Squibb
1:40	<i>Hydrogen-Deuterium Exchange Mass Spectrometry (HDX-MS) Screening Approaches for Studying Global Conformational Structures of Peptides/Proteins in Solution</i> , <u>Alexey A. Makarov</u> , Nicole Schiavone, Gregory Pirrone, Nicholas Pierson, Ian Mangion, Merck & Co.
2:20	Break
2:40	<i>Single-Cell Capillary Electrophoresis Mass Spectrometry Finds Cell Heterogeneity in the Developing Embryo and the Central Nervous System</i> , <u>Peter Nemes</u> , Camille Lombard-Banek, Erika P. Portero, Sam B. Choi, University of Maryland-College Park, Sally A. Moody, Chiara M. Manzini, George Washington University
3:20	<i>A Brief History of Microflow Chromatography Mass Spectrometry</i> , <u>Michael E. Lassman</u> , Merck & Co.

Enabling Real Time Release Testing with PAT, organized by The Coblentz Society Chair: Jim Rydzak, Specere Consulting	
1:00	<i>RTRT as the Final Piece of a Comprehensive Control Strategy in Continuous Manufacturing</i> , <u>Justin G. Pritchard</u> , Kelly Swinney, Vertex Pharmaceuticals
1:40	<i>Points to Consider in Developing an RTRT Capable NIR Method</i> , <u>Gary McGeorge</u> , Bristol-Myers Squibb
2:20	Break
2:40	<i>PAT Tools Critical for Real-Time Release Testing</i> , <u>Carl Anderson</u> , Duquesne University
3:20	<i>Enabling Real Time Release of Solid Oral Dose Products: A Case Study</i> , <u>Sarah Nielsen</u> , Janssen

Surface Analyses for Cultural Heritage II, organized by the New York Conservation Foundation Chair: John Scott, New York Conservation Foundation	
1:00	<i>Applied Paint Analysis for Historic Architecture</i> , <u>Tina Reichenbach</u> , Richbrook Conservation
1:40	<i>Miniaturization of Noninvasive Analytical Instruments: A New Day and New Tools for the Paper Conservator</i> , <u>Theodore Stanley</u> , Collections Conservation, Rare Books & Special Collections, Princeton University Library
2:20	Break
2:40	<i>An ESR Mobile Universal Surface Explorer</i> , <u>Joseph P. Hornak</u> , Lauren E. Switala, Baron E. Black, Celia A. Mercovich, Anjana Seshadri, RIT Magnetic Resonance Laboratory
3:20	<i>Mobile Analysis in Conservation of Outdoor Surfaces</i> , <u>John Scott</u> , New York Conservation Foundation

2018 Preliminary Technical Oral Program

WEDNESDAY MORNING, NOVEMBER 14

Time	Title, Author(s)
EAS Award for Outstanding Achievements in the Fields of Analytical Chemistry <i>Sponsored by Bristol-Myers Squibb and Horiba Scientific</i> Honoring Linda B. McGown, Rensselaer Polytechnic Institute Chair: Isiah M. Warner, Louisiana State University	
8:30	<i>Organic Salts: Tunable Materials for Analytical Applications</i> , Isiah M. Warner , Louisiana State University
9:10	<i>Designer Separations with Smart Nanomaterials</i> , Lisa Holland , West Virginia University
9:50	Break
10:10	<i>Spectroscopy through the Microscope: Probing What's Happening Inside Chromatographic Silica Particles</i> , Joel Harris , David A. Bryce, Jay P. Kitt, University of Utah
10:50	<i>Looks Can be Deceiving: Spectrochemical Analysis Applied to Ocular Surface Phenomena</i> , 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
11:45	Plenary Lecture: Aptamers: A Case Study in Chemical vs. Biological Evolution , Linda B. McGown, Rensselaer Polytechnic Institute

Plenary Lecture
Wednesday, November 14, 11:45am
Aptamers: A Case Study in Chemical vs. Biological Evolution
Linda B. McGown, Rensselaer Polytechnic Institute

*All registered Conferees, Attendees and Exhibitors are invited to attend the Plenary Lecture.
 Light refreshments will be provided immediately after the lecture.*

New York Microscopical Society Ernst Abbe Award Honoring: Peter R. De Forest, John Jay College of Criminal Justice Chairs: John Reffner, John Jay College of Criminal Justice, Brooke Kammrath, University of New Haven	
8:30	<i>Learning about the Small Things that Have Big Impacts on Individual's Lives</i> , Charles Morton , retired, Forensic Analytical Sciences
9:10	<i>The Mystery of the Lost World Trade Center 9/11 Flag: A Trace Evidence Case for the Ages</i> , Nicholas Petraco , Nicholas D. Petraco, John Jay College of Criminal Justice
9:50	Break
10:10	<i>Investigating Potential Mechanisms of Postmortem Hair Root Band (PMRB) Formation</i> , JoAnn Buscaglia , Adam H. Richard, United States Federal Bureau of Investigation, Jack Hietpas, Pennsylvania State University
10:50	<i>Inspiring Microscopy</i> , Peter R. De Forest , John Jay College of Criminal Justice

Averting Drinking Water Disasters with Analytical Chemistry Chairs: James Stuart, University of Connecticut, Satinder Ahuja, Ahuja Consulting	
8:30	<i>GenX - Analytical Environmental Chemistry Illustrates the Failures of our Regulatory System</i> , Lawrence Cahoon , University of North Carolina-Wilmington
9:10	<i>Green Chemistry Solutions to Water Pollution</i> , Rakesh K. Sharma , University of Delhi, Satinder Ahuja , Ahuja Consulting
9:50	Break
10:10	<i>Challenges to Mitigating the Risks Posed by Cyanobacterial Toxins in the 21st Century</i> , James S. Metcalf , Brain Chemistry Labs
10:50	<i>Distribution of Microplastics in Waters Around the New York Metropolitan Area and Assessment of their Role as Potential Vectors of Toxic Compounds</i> , Beizhan Yan , Lamont-Doherty Earth Observatory of Columbia University

Advances in Spectroscopy for Food Safety and Quality Chair: Suzanne Schreyer, Rigaku Analytical Devices	
8:30	<i>Photonics Devices - Do We have Everything We Need to put these Devices into the Hands of an Untrained User</i> , Ellen Miseo , TeakOrigin
9:10	<i>Lies, Damned Lies and Statistics - How Metrics Make the Model</i> , Suzanne Schreyer , Rigaku Analytical Devices
9:50	Break
10:10	<i>Detecting Herb and Spice Adulteration Using Near-Infrared Spectroscopy</i> , Ariel Bohman-Paolo , Kathryn Lawson-Wood, PerkinElmer
10:50	<i>Testing the Next Generation of Quality Assurance Devices for High Commodity Products</i> , Mei-Ling Shotts , Ohio State University

2018 Preliminary Technical Oral Program

Wednesday Morning continued

Novel Approaches to Analysis of Extreme Eco-Toxicological Contaminants Chair: Martin Hackman, New Jersey Department of Environmental Protection	
8:30	<i>Determination of Polycyclic Aromatic Compounds in SRM 1597a via Normal-phase Liquid Chromatography and Gas Chromatography/Mass Spectrometry</i> , <u>Hugh V. Hayes</u> , Andres D. Campiglia, University of Central Florida, Walter B. Wilson, Lane C. Sander, Stephen A. Wise, National Institute of Science and Technology
8:50	<i>Investigation of Photodegradation Products of High-Molecular Weight Polycyclic Aromatic Hydrocarbons in Seawater</i> , <u>Anthony F. T. Moore</u> , Sadia Arif, Andres D. Campiglia, University of Central Florida
9:10	<i>Determination of High Molecular Weight Polycyclic Aromatic Hydrocarbons via Fluorescence Wavelength-Time Matrices and Time-Resolved Excitation Emission Matrices in Environmental Extracts</i> , <u>Khang D. Trieu</u> , Stacy M. Wise, Anthony Santana, Andres Campiglia, University of Central Florida
9:30	<i>New Simultaneous Optical Technique for Monitoring Organic Pollutants in Source Water</i> , <u>Linxi Chen</u> , Adam Gilmore, Reiji Kojima, Karoly Csatorday, HORIBA Scientific
9:50	Break
10:10	<i>Application of Electrochemistry in Extreme Environments</i> , <u>Donald B. Nuzzio</u> , Analytical Instrument Systems
10:30	<i>Screening of Pesticides in Bat Guano</i> , <u>Archie Covely</u> , Katherine Harms, Serena Mang, Joe Benton, Amanda Vangieri, Kasandra Cruz, Thomas Betts, Kutztown University of Pennsylvania
10:50	<i>High Performance Silica Based Organic-Inorganic Hybrid Catalytic Materials for Industrially Significant Organic Transformations & Degradation of Toxic Pollutants Present in Wastewater</i> , <u>Sriparna Dutta</u> , Rakesh K. Sharma, University of Delhi
11:10	<i>Design and Synthesis of Functionalized Magnetic Nanoadsorbents for the Selective Removal of Metal Ions</i> , <u>Kanika Solanki</u> , Rakesh K. Sharma, University of Delhi

Modern Applications of Supercritical Fluid Chromatography, sponsored by the Chromatography Forum of the Delaware Valley Chair: Ray McClain, Merck & Co.	
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8:30	<i>Innovative Techniques and Applications of Supercritical Fluid Chromatography for Drug Discovery Support</i> , <u>Yingru Zhang</u> , Bristol-Myers Squibb, Chunlei Wang, MedImmune
9:10	<i>Supercritical Fluid Chromatography-Mass Spectrometry for Use in PK/PD Studies</i> , <u>Fangbiao Li</u> , Merck & Co.
9:50	Break
10:10	<i>Advantageous Use of SFC for Separations of Novel Therapeutic Peptides and Peptide Libraries</i> , <u>Manuel Ventura</u> , ChemPartner Corp.
10:50	<i>Revolutionizing Pharmaceutical Compound Analysis by Implementation of 2D-LC-SFC-MS</i> , <u>Mohammad Al-Sayah</u> , Meenakshi Goel, CJ Venkatramani, Genentech, Eli Larson, Gustavus Adolphus College

Optimizing HPLC Analysis through Column Selection and Modeling Chairs: Mariann Neverovitch & Elizabeth Moroney, Bristol-Myers Squibb	
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8:30	<i>New Reversed-Phase SPP Columns with Alternate Selectivity for Small Molecules</i> , <u>Richard A. Henry</u> , Independent Consultant, Stephanie A. Schuster, Conner McHale, William Johnson, Joseph J. DeStefano, Advanced Materials Technology, Inc.
8:50	<i>Streamlined Reversed Phase HPLC and UHPLC Method Development Using a Combined Column Screening and Software Modeling Approach</i> , <u>Geoffrey M. Faden</u> , MAC-MOD Analytical, Alan P. Mckeown, Advanced Chromatography Technologies
9:10	<i>A Bio-Inert, Durable, and Reliable Surface for HPLC and UHPLC Columns and Components Used in the Analysis of Proteins and Other Difficult Molecules</i> , <u>Jesse Bischof</u> , David Smith, Gary Barone, Luke Patterson, SilcoTek Corp.
9:30	<i>Retention Modeling and In Silico Optimization: An Integral Component of Reverse Phase Liquid Chromatography Method Development</i> , <u>Karthik Jayaraman</u> , Ashok Kumar Rajendran, Saravanan Natarajan, Santosh Gandhi, Mallikarjun Narayanam, Hemant Bhutani, Bristol-Myers Squibb - Biocon Research Center

2018 Preliminary Technical Oral Program

Wednesday Morning continued

Challenges in Pharmaceutical Analysis: Formulations and Method Transfer Chairs: Mariann Neverovitch & Elizabeth Moroney, Bristol-Myers Squibb	
10:10	<i>A Multicompartment Transfer System: Understanding a Non-Linear In-Vivo Behavior of Compound A Amorphous Solid Dispersion</i> , <u>Sanjaykumar Patel</u> , Andre Hermans, Hanmi Xi, James Ormes, Wei Zhu, Binfeng Xia, Filippos Kesisoglou, Wei Xu, Justin Pennington, Merck & Co.
10:30	<i>All You Wanted to Know about HPLC Method Development and Transfer, but were Afraid to Ask</i> , <u>Stephanie A. Schuster</u> , Conner W. McHale, Advanced Materials Technology, Inc., Thomas J. Waeghe, Mac-Mod Analytical
10:50	<i>The Effect of Alkaline Earth Cations on Amlodipine Besylate and Croscarmellose Sodium Drug-Excipient Interaction in a Sample Solution</i> , <u>Prasad Panzade</u> , Yuliya Yarkho, Apotex Inc.
11:10	<i>Correlated Chemical and Morphology Imaging to Investigate Formulation Dissolution</i> , <u>Slobodan Sasic</u> Kenneth J. Smith, Tim Prusnick, George Butcher, Hazel Garvie-Cook, Renishaw

Sensitive Electrochemical Methods from Sensors to Catalysis Chairs: Michael B. Hicks & Brittany Kassim, Merck & Co.	
8:30	<i>Neurotransmitter-Metabolite Detection with Fast Scan Cyclic Voltammetry</i> , <u>Alexander G. Zestos</u> , Alexander Mendoza, American University
8:50	<i>Naked-Eye Electrochemical E.coli. Detection</i> , <u>Kwok-Fan Chow</u> , Sachintha Wijesinghe, Jungmin Oh, University of Massachusetts-Lowell
9:10	<i>Performance of Electrochemical Sensor of Nitrite, a Biomarker of Oxidative Stress, in Exhaled Breath Condensate</i> , <u>Ashley Cole</u> , Azam Gholizadeh, Clifford Weisel, Mehdi Javanmard, Vladimir Mishin, Rutgers University
9:30	<i>Zirconium-Iridium Mixed Oxide Electrocatalysts for the Oxygen Evolution Reaction</i> , <u>Edward Y. Zhang</u> , Xiaofang Yang, Bruce E. Koel, Princeton University
9:50	Break

Raman Material Identification Chairs: Michael B. Hicks & Brittany Kassim, Merck & Co.	
10:10	<i>Application of 2D COS Raman Spectra to Structural Elucidation of Polymers</i> , <u>Fran Adar</u> , HORIBA Scientific
10:30	<i>Counterfeit Tablet Analysis Using a Handheld Raman Spectroscopy</i> , <u>Stephen W. Hoag</u> , University of Maryland-Baltimore, Adam J. Hopkins, Metrohm USA
10:50	<i>Improving RMID Results with Handheld Raman Instrument Control Parameters</i> , <u>Adam Hopkins</u> , Mackenzie Speer, Metrohm USA
11:10	<i>Investigation of Physical and Chemical Variability on Quantitative Transmission Raman Models</i> , <u>Caitlin N. Baldasano</u> , Benoit Igne, Christian Airiau, GlaxoSmithKline

Analytical Chemistry on the Go: Handheld Spectroscopy Applications, organized by The Coblenz Society Chair: Brandye Smith-Goettler, Merck & Co.	
8:30	<i>Use of Handheld Spectrometers as Screening Tools for Detection of Substandard and Falsified Medicines, Perceptions and Reality</i> , <u>Mustapha Hajjou</u> , Stephen Kimatu, United States Pharmacopeia
9:10	<i>Food Safety Screening with Surface Enhanced Raman Spectroscopy: Ensuring Safe Food Reaches Consumers</i> , <u>Katherine A. Bakeev</u> , Chris Ye, Kevin Hu, Philip Zhou, Jack Zhou, B&W Tek, Qizhen Chen, Xiamen Perser-Tech Ltd. Co.
9:50	Break
10:10	<i>Use of Handheld Raman and Near-Infrared Spectroscopic Techniques for Identifying Counterfeit Lifestyle and Life-Saving Medicines</i> , <u>Sulaf Assi</u> , Thomas Coombs, Jacob McEachran, Bournemouth University
10:50	<i>Handheld Visible Spectrometry: the Promise and the Limitations</i> , <u>Alexander Scheeline</u> , SpectroClick Inc.

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2018 Preliminary Technical Oral Program

WEDNESDAY AFTERNOON, NOVEMBER 14

Memorial Session Honoring Richard Saferstein, sponsored by New Jersey Association of Forensic Scientists Chair: Thomas Brettell, Cedar Crest College	
1:30	<i>Dr. Richard Saferstein's Contributions to Forensic Science in New Jersey</i> , <u>Thomas Brettell</u> , Cedar Crest College
2:10	<i>Forensic Mass Spectrometry: The Past, Present and Future - A Discussion Honoring the Immeasurable Contributions of Dr. Richard Saferstein to the Field of Forensic Science</i> , <u>Adam B. Hall</u> , Northeastern University
2:50	<i>Dick Saferstein: Leader, Mentor, Friend</i> , <u>Neil D. Jespersen</u> , St. John's University
3:30	<i>Remembering Dick Saferstein: The Man Who Saved EAS from Extinction</i> , <u>Stephen Scypinski</u> , Daiichi Sankyo, Inc.

Enhancement Strategies in Raman and Infrared Spectroscopy, organized by The Coblenz Society Chair: Brandye Smith-Goettler, Merck & Co.	
1:30	<i>Directional Raman Scattering: A Tool for Measuring Adsorption and Chemical Content at Smooth Interfaces</i> , <u>Emily A. Smith</u> , Charles K.A. Nyamekye, Iowa State University, Stephen C. Weibel, Surface Photonics Inc.
2:10	<i>Surface Enhanced Raman Spectroscopy for Food Safety Applications</i> , <u>Lili He</u> , University of Massachusetts - Amherst
2:50	<i>Pharmaceutical Case Studies Using Transmission Raman</i> , <u>Julia A. Griffen</u> , Agilent Technologies
3:30	<i>What are the Physical Limits to Field Amplification and Intensity Enhancement in Surface Enhanced Raman Spectroscopy?</i> , <u>Stefan Franzen</u> , North Carolina State University

Testing of Active Compounds and Contaminants in Food & Cannabis Products Chair: Oscar Liu, BeyondSpring Pharmaceuticals	
1:30	<i>Determination of Polyphenols, Glycoalkaloids and Saponins in Solanum scabrum Fruits Using LC/UV/MS</i> , <u>Bo Yuan</u> , James Simon, Qingli Wu, Rutgers University
1:50	<i>Functional Cannabis: Pharmacological Foundations of Cannabis Chemovars</i> , <u>Mark Lewis</u> , Napro Research
2:10	<i>Terpenes and Residual Solvents in Cannabis by Headspace GCMS</i> , <u>Thomas Mancuso</u> , David Scott, Lee Marotta PerkinElmer Inc.
2:30	<i>Cannabinoid Monitoring in Dried Cannabis Flower and Edibles by HPLC-PDA</i> , <u>Jamie Foss</u> , PerkinElmer

Ensuring Quality of Pharmaceutical Products Chairs: Leonel Santos and Sujatha Ramakrishna, United States Pharmacopeia	
1:30	<i>USP-FDA Collaboration: Development of a Documentary Public Standard Diphenhydramine and Phenylephrine Hydrochlorides Oral Solution</i> , <u>Clydewyn M. Anthony</u> , Leonel M. Santos, United States Pharmacopeial Convention, Douglas Kirkpatrick, Jan Yang, Margaret Fein, Federal Drug Administration
1:50	<i>USP Monograph Modernization - Ion Chromatography Applications</i> , <u>Harihara Subramanian Narayanan</u> , Metrohm USA
2:10	<i>Strategy and Troubleshooting for Analytical Method Transfers to Global Manufacturing Sites in Support of a Small Molecule Multistep Synthesis</i> , <u>Peter I. Tattersall</u> , Xuejun Xu, Xin Bu, Lydia Breckenridge, Mohan Kanthasamy, Adrian Doggett, Diarmuid Scanlon, Morgan O'Sullivan, Bristol Myers Squibb
2:30	<i>Multiple Techniques for Determination of Amorphous Content of Crystalline Pharmaceutical Materials</i> , <u>Charles Potter</u> , TA Instruments
2:50	<i>The Karl Fischer Titration Process</i> , <u>Bruce C. Herzig</u> , MilliporeSigma
3:10	<i>Accurate Moisture Determination in Lyophilized Products</i> , <u>Kerri-Ann Blake</u> , Metrohm USA
3:30	<i>Impact of Pharmaceutical Excipients on Chemical Stability of Drug Product Formulations Under Thermal Stress and Light Exposure</i> , <u>Margaret Brunell</u> , Elizabeth Pierson, Paul Walsh, Merck & Co.

Program continues on next page

2018 Preliminary Technical Oral Program

Wednesday Afternoon continued

Proteomics and Protein Bioanalysis	
Chair: Wenying Jian, Janssen R&D and John Kellie, GlaxoSmithKline	
1:30	<i>Wide Pore Superficially Porous Particles with Various Bonded Phases for High Resolution Protein Chromatography, <u>William Miles</u>, Barry Boyes, Benjamin Libert, Stephanie Schuster, Brian Wagner, Conner McHale, Advanced Materials Technology</i>
1:50	<i>Application of Time-Resolved Fluorescence Spectroscopy to Monitor Protein Higher Order Structure Changes, <u>Sergey Arzhantsev</u>, United States Food and Drug Administration</i>
2:10	<i>Proteomic Analysis of the Lake Trout (<i>Salvelinus Namaycush</i>), <u>Emmalyn J. Dupree</u>, Bernard Crimmins, Thomas Holsen, Costel C. Darie, Clarkson University, James Pagano, SUNY Oswego</i>
2:30	<i>Mass Spectrometry Based Proteomics Investigation of Induced Obstructive Sleep Apnea (OSA) in Rat Atria, <u>Costel C. Darie</u>, Devika Channaveerappa, Jacob Lux, Kelly L. Wormwood, Clarkson University, Brian Panama, Meredith McLerie, Masonic Labs</i>
2:50	<i>Preventing Separation Anxiety: Strategies and Techniques for Improved Biomacromolecule Separations, <u>Cory E. Muraco</u>, Gary Oden Jr., Michael Ye, MilliporeSigma</i>
3:10	<i>Probing Peptide-Peptide/Peptide-Excipient Interactions Using Native Mass Spectrometry, <u>Yuejie Zhao</u>, Jameson Bothe, Alexandra Andrews, Yong Liu, Andreas Abend, Peter Wuelfing, Merck & Co., Pengyi Zhao, Hao Chen, New Jersey Institute of Technology</i>

Optimization of Laboratory Practices and Analytical Methods	
Chair: Anthony Provatias, University of Connecticut	
1:30	<i>Accelerating Pharmaceutical Development from Pre-Candidate Selection to First-Time-in-Human Clinical Studies Using Automated Platforms, <u>Kaitlin M. Grinias</u>, GlaxoSmithKline</i>
1:50	<i>Peptide Mapping: Best Practices for Generating Reliable and Robust Liquid Chromatography Methods, Jennifer Simeone, Paula Hong, Waters Corporation</i>
2:10	<i>A New Route to Automation of Experimentation, Scot Abbott, Phoenix</i>
2:30	<i>Improvement of a Current EP Monograph Related Substances Method for a Widely Used API Using a 100% QbD-Aligned Approach and the Fusion QbD® Software Platform, <u>Richard Verseput</u>, Joseph Turpin, S-Matrix Corporation, Ravi Ravichandran, United States Pharmacopeial Convention</i>
2:50	<i>Increasing Sample Throughput Using Parallel Column Regeneration, <u>Zhimin Li</u>, Paula Hong, Patricia McConville, Waters</i>
3:10	<i>Reviving and Repurposing Laboratory Equipment, Scot Abbott, Phoenix</i>
3:30	<i>New Zinc Oxide Assay as per USP 591 Using Ion Chromatography with PCR and UV-Vis Detection, Harihara Subramanian Narayanan, Shibu Paul, Jay Sheffer, Metrohm USA</i>

The E-Poster Sessions can be found on our website