

Your Name: _____



Mass Spectrometry for Complex Mixtures in Energy and the Environment

Organized by

Janne Jänis, *University of Eastern Finland*
&

Amy M. McKenna, *National High Magnetic Field Laboratory*

34th Sanibel Conference on Mass Spectrometry
January 21 – 24, 2024
Hilton Bayfront, St. Petersburg, FL

Sanibel Committee

Xiuxia Du
UNC at Charlotte

Sharon Pitteri
Stanford University

Sarah Rogstad
FDA

John Stutzman
DOW Inc.

Thanks for your support!



SUNDAY, JANUARY 21

- 4:00 - 7:00 pm **Setup all posters, *Grand Bay South***
- 6:00 - 7:00 pm **Registration**
- 7:00 - 7:10 pm **Opening Remarks, Janne Jänis and Amy M. McKenna**
Grand Bay North

7:10 - 8:00 pm, *Grand Bay North*
Keynote Lecture

Complex Mixture Analysis by Ultra-High Resolution FT-ICR Mass Spectrometry
Ryan Rodgers, *NHMFL/FSU*

Session Chair: Janne Jänis

8:00 - 9:00 pm, *Grand Bay South*
Reception

**The following students received an ASMS Student Travel Award.
Congratulations!**

Nicole Auvil
Carnegie Mellon University

Lydia Babcock-Adams
National High Magnetic Field Laboratory

Shubhra Bhattacharjee
Texas Tech University

Martin Kurek
Florida State University

Esther Mbuna
Ohio University

Anil Timilsina
University of Nevada, Reno

Contribute a manuscript for the *JASMS* Special Issue on “Mass Spectrometry for Complex Mixtures in Energy and the Environment”

Attendees, presenters and non-attendees are invited to submit

Submission Deadline: May 30, 2024

<https://www.asms.org/conferences/sanibel-conference>

or



MONDAY, JANUARY 22

7:30 - 8:30 am **Continental Breakfast**, *Grand Bay South*

8:30 - 9:20 am, Grand Bay North
Fossil Fuels I: Challenges & Advances that Enable Heavy Oil Characterization
Session Chair: Pierre Giusti

8:30 – 8:55 am An Unlikely Couple: Applications of Inorganic Mass Spectrometry (ICP-MS) in the Molecular Characterization of Complex Organic Mixtures,
Brice Bouyssiére, *University of Pau*

8:55 - 9:20 am Lessons Learned from a Decade-Long Assessment of Asphaltenes by Ultrahigh-Resolution Mass Spectrometry and Implications for Complex Mixture Analysis,
Martha Chacon-Patino, *NHMFL/FSU*

9:20 – 9:40 am **Coffee Break**, *Grand Bay North*

9:40 am – 10:30 am
Fossil Fuels II: Petroleum Biomarkers
Session Chair: Christina Kelly

9:40 – 10:05 am Comprehensive Analytical Approaches for Biomarker Assessments: From Source Organics to Oil Spills, **Jagos Radovic**, *University of Houston*

10:05 – 10:30 am The Impact of Mass Spectrometry to Organic Geochemistry over the Last 60 Years
Cliff Walters, *ExxonMobil*

10:30 – 11:20 am
Biofuels and Renewable Fuels
Session Chair: Regina Baglia

10:30 – 10:55 am Uncovering the Complex Reaction Mechanisms of Hydrothermal Liquefaction Using Complementary Mass Spectrometry Methods
Heather Leclerc, *Worcester Polytechnic Institute*

10:55 – 11:20 am The Impact of Protein Removal on Biocrude Oil Quality from Algal Hydrothermal Liquefaction, **Robert Young**, *New Mexico State University*

11:20 -11:30 am **Group Photo**

11:30 – 12:30 pm **Group Lunch**, provided by ASMS
Grand Bay South

MONDAY, JANUARY 22

12:30 – 1:20 pm, Grand Bay North
Aerosol & Atmospheric Chemistry
Session Chair: Christopher Ruger

- 12:30 – 12:55 pm Molecular Characteristics, Sources and Transformation of Atmospheric Dissolved Organic Matter Revealed by FT-MS Analysis, **Maxime Bridoux**, *CEA, France*
- 12:55 – 1:20 pm Wood Combustion Aerosol Analysis with DIP-APCI FT-ICR MS, **Janne Janis**, *University of Eastern Finland*

1:20 – 2:10 pm, Grand Bay North
Soil Organic Matter – Terrestrial Inputs to Global Organic Carbon Cycling I
Session Chair: Michael Gonsior

- 1:20 – 1:45 pm Salt Marsh Soil Organic Matter Composition: Implications for Carbon Storage and Cycling, **Andrew Wozniak**, *University of Delaware*
- 1:45 – 2:10 pm A Molecular Window into Organic-Metal and Organic-Mineral Interactions, **Rene Boiteau**, *University of Minnesota*
- 2:10 – 7:00 pm **Free Time**

7:00 – 8:00 pm, Grand Bay North
Submitted Talks I
Session Chair: Yuri Corilo

- 7:00 – 7:20 pm Utilizing Ion Mobility to Enhance Targeted and Non-Targeted Analysis of PFAS from a Landfill Leachate Sample, **Sarah Dowd**, *Waters Corporation*
- 7:20 – 7:40 pm Dissolved Organic Material (DOM) characterization with LC – 21 T FT-ICR MS, **Joseph Frye-Jones**, *National High Magnetic Field Laboratory*
- 7:40 – 8:00 pm Two-minute Flash Talks from the Odd-Numbered Posters, *see Poster List page*

8:00-10:00 pm, Grand Bay South
Poster Session I & Reception
Odd-Numbered Posters Present

TUESDAY, JANUARY 23

7:30 - 8:30 am **Continental Breakfast**, *Grand Bay South*

8:00 – 9:00 am, *Grand Bay North*
Discussion Panel: How to Make the FTMS Data More Accessible for Scientists Worldwide
Amy M. McKenna

9:00 – 9:50 am
Soil Organic Matter – Terrestrial Inputs to Global Organic Carbon Cycling II
Session Chair: Martin Kurek

9:00 – 9:25 am Revealing the Organic Copper Speciation in Coastal Estuarine and Marine Environments by 21 TFF-ICR Mass Spectrometry,
Lydia Babcock-Adams, *National High Magnetic Field Laboratory*

9:25 – 9:50 am New Insights on Organic Sulfur Chemistry by Complementary Atomic-Level and Molecular-Level Approaches, **Brett Poulin**, *UC Davis*

9:50 – 10:05 am Coffee Break

10:05 – 11:20 am
Applications of Mass Spectrometry for Insight into Extreme Environments
Session Chair: Srinidhi Lokesh

10:05 – 10:30 am FT-ICR MS Insights into the Changing Cryosphere,
Robert Spencer, *Florida State University*

10:30 – 10:55 am Impact of Wildfires on Water and Soil Organic Matter Chemistry,
Thomas Borch, *Colorado State University*

10:55 – 11:20 am Molecular Properties of the Organics Released as Plastics Photochemically Dissolve in Sunlit Waters, **Aron Stubbins**, *Northeastern University*

11:20 -12:50 pm **Group Lunch**, provided by ASMS
Grand Bay South

TUESDAY, JANUARY 23

12:50 – 2:05 pm, *Grand Bay North* **Instrumentation and Data Analysis**

Session Chair: Carlos Afonso

- 12:50 – 1:15 pm Deciphering Complexity : Perspectives and Challenges in Algorithmic Data Processing for Mass Spectrometry of Complex Mixtures,
Yuri Corilo, *Pacific Northwest National Laboratory*
- 1:15 – 1:40 pm Advances in Photoionization High-Resolution Mass Spectrometry and Data Processing: Unveiling Complex Mixtures in Energy Transition Research,
Christopher Rüger, *University of Rostock*
- 1:40 – 2:05 pm Mass Selective Depletion of Chemical Noise for Improved Ultrahigh Resolution Analysis of Complex Mixtures, **Chad Weisbrod**, *NHMFL/FSU*
- 2:05 – 2:20 pm Coffee Break

2:20 – 3:05 pm, *Grand Bay North* **Direct Sampling and Novel Applications of MS in Geochemical Systems**

Session Chair: Jagos Radovich

- 2:20 – 2:45 pm Life in a Nutshell: Profiling the Chemistry of Organic Matter in Biomes and Abiomes,
Philippe Schmitt-Kopplin, *Helmholtz Zentrum München*
- 2:45 – 3:05 pm Comprehensive Geochemical Evaluation of Crude Oil Origin, Thermal Maturity, and Biodegradation by Petroleomic and Machine Learning Tools,
Boniek Gontijo Vaz, *Federal University of Goiás – UFG*

7:00 - 8:00 pm *Grand Bay South* **Submitted Talks II**

Session Chair: Brett Poulin

- 7:00 – 7:20 pm Online Liquid Chromatography coupled to 21 Tesla FTICR Mass Spectrometry for Natural Organic Matter Characterization,
William Kew, *Pacific Northwest National Laboratory*
- 7:20 – 7:40 pm Investigating Dissociation Mechanisms of Naphthenic Acid Isomers using Collision-Induced Dissociation coupled with Computational Chemistr,
Esther Mbuna, *Ohio University*
- 7:40 – 8:20 pm 2-minute Flash Talks from Even-Numbered Posters, *see Poster List page*

8:00-10:00 pm, *Grand Bay South* **Poster Session II & Reception** **Even-Numbered Posters Present**

NOTES

WEDNESDAY, JANUARY 24

7:30 - 8:30 am **Continental Breakfast**, *Grand Bay South*

8:30 – 10:10 am, *Grand Bay North*

Future Directions and Challenges in Emerging Contaminants

Session Chair: Sarah Dowd

8:30 – 8:55 am From Pesticides to PFAS: Utilizing Ion Mobility Spectrometry in Non-Targeted Analyses, **Erin Baker**, *University of North Carolina*

8:55 – 9:20 am Probing Alterations to the Physical and Chemical Properties of Oil Spilled at Sea: Implications for Fate Models and Response Operations, **Collin Ward**, *Woods Hole Oceanographic Institute*

9:20 – 9:45 am From Septics to Landfills: Tracer Development and Source Tracking of Environmental Contaminants, **Michael Gonsior**, *University of Maryland*

9:45 – 10:10 am Molecular Characterization of Electrodes Passivation Layers in Lithium-Ion Batteries, **Pierre Giusti**, *TotalEnergies*

10:10 - 10:25 am, Coffee Break

10:25 – 11:15 am, *Grand Bay North*

Keynote Lecture

Analysis of Emerging Environmental Contaminants Using Mass Spectrometry: State of the Art

Susan Richardson, *University of South Carolina*

Session Chair: Amy McKenna

11:15 – 11:25 am **Closing Remarks**, Janne Jänis and Amy M. McKenna

POSTERS

Grand Bay South

Setup all posters by 7:00 pm on Sunday

ODD-numbered posters will present during the Monday Poster Session

EVEN-numbered posters will present during the Tuesday Poster Session

- 1 **Vaping Ions from E-Cigarettes;** Nicole C Auvil¹; Mark E Bier¹; ¹*Carnegie Mellon University, Pittsburgh, PA*
- 2 **Characterization of Organics in Produced Water;** Regina Baglia¹; Lauren Burrows¹; Ollie Donald¹; ¹*National Energy Technology Laboratory, Pittsburgh, PA*
- 3 **A Protocol for the Identification of Arsenolipids in Marine Standard Reference Materials;** Shubhra Bhattacharjee¹; Dr. Miguel Chacon Teran²; Dr. Jeremy Bailoo³; Dr. Michael Findlater²; Dr. Stacey Louie⁴; Dr. Amrika Deonarine¹; ¹*Texas Tech University, Lubbock, TX*; ²*University of California, Merced, CA*; ³*Texas Tech University Health Sciences Center, Lubbock, TX*; ⁴*University of Houston, Houston, TX*
- 4 **Advanced Mass Spectrometry Analysis of Iron Nanoparticle-Treated Lipids in Cyanobacteria for Biofuel Production;** Huan Chen¹; Samson Gichuki²; Yuan Lin³; LaDonna Wyatt²; Ying Liu⁴; Samuel Moore⁴; David Gual⁴; Viji Sittther²; ¹*National High Magnetic Field Laboratory, Florida State University, Tallahassee, FL*; ²*Department of Biology, Morgan State University, Baltimore, MD*; ³*National High Magnetic Field Laboratory, Tallahassee, FL*; ⁴*School of Chemistry and Biochemistry, Georgia Institute of Technology, Atlanta, GA*
- 5 **Analysis of Petroleum Samples Measured by Using a Combination of GCxGC and High Resolution MS;** John Dane¹; Robert B. Cody¹; Kirk R Jensen¹; ¹*JEOL USA, Inc., Peabody, MA*
- 6 **High Molecular Weight PAHs (300 – 700 Da) in Diesel Particulate and Coal Tar Using Atmospheric Pressure Charge Exchange Ionization;** Sarah Dowd¹; Douglas Stevens¹; Frank Dorman¹; Christopher Reddy²; Bryan James²; Robert Nelson²; ¹*Waters Corporation, Milford, MA*; ²*Woods Hole Oceanographic Institution, Woods Hole, MA*
- 7 **Multiplexing Hard and Soft Electron Ionisation for Detailed Characterisation of Petrochemicals by GCxGC-TOF MS;** Laura McGregor¹; Matthew Edwards¹; Peter Grosshans¹; ¹*SepSolve Analytical, Peterborough, United Kingdom*
- 8 **High Resolution Mobility-FT ICR MS/MS for DOM Chemical Formula Based Structural Assignment;** Francisco Fernandez Lima; *Florida International University, Miami, FL*
- 9 **Trace Sulfur Analysis in Hydrocarbon Matrices via Derivatization;** Matthew Hurt; *Chevron, Richmond, CA*
- 10 **Using Chromatographic Deconvolution and Soft Ionization MS to Improve Automated Data Analysis of Non-Targeted Compounds Measured by LPGC Fast Separation;** Kirk R Jensen¹; Robert B. Cody¹; A. John Dane, Jr.¹; ¹*JEOL USA, Inc., Peabody, MA*
- 11 **Piecing Together Pollutant Profiles: Combining High-Resolution MS from Multiple Ionization Modes with Multidimensional GC for Petroleum Forensics and Environmental Analyses;** Christina N Kelly¹; Joseph E Binkley¹; John Hayes¹; ¹*LECO Corporation, Saint Joseph, MI*

POSTERS

Grand Bay South

Setup all posters by 7:00 pm on Sunday

ODD-numbered posters will present during the Monday Poster Session

EVEN-numbered posters will present during the Tuesday Poster Session

- 12 **Ultra-high Resolution Analysis of Wetland Dissolved Organic Matter across the United States of America;** Martin R. Kurek¹; Kimberly Wickland²; Natalie A. Nichols³; Amy M. McKenna⁴; Steven M. Anderson⁵; Mark M. Dornblaser⁶; Nikaan Koupaei-Abyazani⁷; Brett A. Poulin⁸; ¹*Florida State University, Tallahassee, FL*; ²*US Geological Survey Geosciences and Environmental Change Science Center, Denver, CO*; ³*Indiana University-Purdue University Indianapolis, Indianapolis, IN*; ⁴*National High Magnetic Field Laboratory, Tallahassee, FL*; ⁵*Duke University, Durham, NC*; ⁶*US Geological Survey, Boulder, CO*; ⁷*University of Wisconsin, Madison, WI*; ⁸*University of California Davis, Davis, CA*; ⁹*US Geological Survey Northern Prairie Wildlife Research Center, Jamestown, ND*; ¹⁰*University of Alaska Southeast, Juneau, AK*
- 13 **Understanding Asphalt: An Analysis of Vanadyl Porphyrins and Sulfur;** Kushal Modi; *Bruker Scientific, Indianapolis, IN*
- 14 **Identifying Quinones in Aqueous Environmental (Biochar) Media through Tagging with Cysteine and Cysteine-Contained Peptides and High Resolution Mass Spectrometry Analysis;** Anil Timilsina¹; Srinidhi Lokesh²; Abrar Shahriar¹; Travis Numan¹; Rene Boiteau³; Christian Dewey³; Laurinda Nyarko³; Paolo Stincone⁴; Daniel Petras⁴; ¹*University Of Nevada Reno, Reno, NV*; ²*Colorado State University, Fort Collins, CO*; ³*University of Minnesota, Minneapolis, MN*; ⁴*University of Tübingen, Tübingen, Germany*
- 16 **Investigating Dissociation Mechanisms of Naphthenic Acid Isomers using Collision-Induced Dissociation coupled with Computational Chemistry;** Esther Mbuna¹; Nathan Gard¹; Cayla See¹; Andrew Adam¹; Benjamin J Bythell^{1,2}; ¹*Ohio University, Athens, OH*; ²*University of Oregon, Eugene, OR*

DIRECTORY OF PARTICIPANTS

Carlos Afonso

University of Rouen-Normandy
IRCOF UMR6014
Rue Tesnière
Mont Saint Aignan, France 76130
carlos.afonso@univ-rouen.fr

Nicole Auvil

Carnegie Mellon University
4400 Fifth Ave
Pittsburgh, PA 15213
nauvil@andrew.cmu.edu

Lydia Babcock-Adams

National High Magnetic Field
Laboratory
1800 East Paul Dirac Drive
Tallahassee, FL 32310
babcock-adams@magnet.fsu.edu

Regina Baglia

National Energy Technology
Laboratory
626 Cochran Mill Road
B93-305
Pittsburgh, PA 15236
regina.baglia@netl.doe.gov

Erin Baker

University of North Carolina
Caudill Laboratories 017
Department of Chemistry
Chapel Hill, NC 27599
erinmsb@unc.edu

Shubhra Bhattacharjee

Texas Tech University
2801 Slide Road, apt 19
Lubbock, TX 79407
djzsb@yahoo.com

Rene Boiteau

University of Minnesota
Minneapolis, MN 55455
rboiteau@umn.edu

Thomas Borch

Colorado State University
Fort Collins, CO 80523
thomas.borch@colostate.edu

Brice Bouyssiere

LCABIE - CNRS UMR 5254
2 Av. Pr. Angot
Hélioparc / IPREM
Pau, France 64053
brice.bouyssiere@univ-pau.fr

Maxime Bridoux

CEA
Bruyères-Le Châtel, France
maxime.bridoux@cea.fr

Martha Chacon-Patino

Florida State University
National High Magnetic Field
Laboratory
1800 E. Paul Dirac Drive
Tallahassee, FL 32310
chacon@magnet.fsu.edu

Huan Chen

Florida State University
1800 E. Paul Dirac Dr
Tallahassee, FL 32310
huan.chen@magnet.fsu.edu

Yuri Corilo

Pacific Northwest National
Laboratory
3335 Innovation Boulevard
MSIN K8-83
Richland, WA 99352
corilo@pnnl.gov

John Dane

JEOL USA, Inc.
11 Dearborn Rd.
Peabody, MA
jdane@jeol.com

Andrew DeBlase

University of Dayton Research
Institute
300 College Park
Dayton, OH 45469
andrew.deblase@udri.udayton.edu

Amrika Deonarine

Texas Tech University
911 Boston Avenue
Lubbock, TX 79409
amrika.deonarine@ttu.edu

Sarah Dowd

Waters Corporation
5 Technology Drive B
Milford, MA
sarah_dowd@waters.com

Matthew Edwards

SepSolve Analytical
826 KING ST N
Unit 15
WATERLOO, Canada
medwards@sepsolve.com

Francisco Fernandez Lima

Florida International University
Dept Chemistry AHC4-233
11200 SW 8th St
Miami, FL 33199
fernandf@fiu.edu

Joseph Frye-Jones

Florida State University
95 Chieftan Way Rm 118 DLC
Tallahassee, FL 32306
josephwfraye@gmail.com

Pierre Giusti

TotalEnergies
TRTG
BP 27
Harfleur, France
pierre.giusti@totalenergies.com

Michael Gonsior

University of Maryland
Baltimore, MD 20742
gonsior@umces.edu

Boniek Gontijo Vaz

Federal University of Goiás - UFG
Instituto de Química - Campus
Samambaia - UFG
Goiânia, Brazil 74690900
boniek@ufg.br

Peter Grosshans

Markes International LTD
2901 SW 41st ST
APT 3107
Ocala, FL 34474
pgrosshans@markes.com

Matthew Hurt

Chevron
100 Chevron Way
Richmond, CA 94801
hurtmatt@gmail.com

Janne Janis

University of Eastern Finland
Department of Chemistry
PO Box 111
Joensuu, Finland
janne.janis@uef.fi

Kirk Jensen

JEOL USA, Inc.
11 Dearborn Rd
Peabody, MA
kjensen@jeol.com

Igor Kaltashov

Univ. of Massachusetts/Chemistry
Dept.
240 Thatcher Way
Life Science Laboratories N369
Amherst, MA
kaltashov@chem.umass.edu

Bryan Katzenmeyer

JEOL
11 Dearborn Road
Peabody, MA
bkatzenmeyer@jeol.com

DIRECTORY OF PARTICIPANTS

Christina Kelly
LECO Corporation
1850 Hilltop
Saint Joseph, MI 49085
christina_kelly@leco.com

Frank Kero
Bruker
5490 Ivy Nole
Cumming, GA 30040
frankkero@gmail.com

William Kew
Pacific Northwest National
Laboratory
Environmental Molecular Sciences
Laboratory
Richland, WA 99354
will.kew@gmail.com

Martin Kurek
Florida State University
2212 Victory Garden Ln
Tallahassee, FL 32301
mrk19f@fsu.edu

Heather Leclerc
Worcester Polytechnic Institute
Worcester, MA
hleclerc@wpi.edu

Srinidhi Lokesh
Colorado State University
307 University Ave
C010
Fort Collins, CO 80521
sri.lokesh@colostate.edu

Esther Mbuna
Ohio University
133 University Terrace
Athens, OH 45701
em695219@ohio.edu

Amy McKenna
Nat'l High Magnetic Field
Laboratory
1800 East Paul Dirac Drive
Tallahassee, FL
mckenna@magnet.fsu.edu

Kushal Modi
Bruker Scientific
1314 Olive St.
Indianapolis, IN 46203
Kushal.Modi@bruker.com

Sharon Pitteri
Stanford University
3155 Porter Drive
Palo Alto, CA 94304
spitteri@stanford.edu

Brett Poulin
US Geological Survey
450 Bioletti Way
Davis, CA 95616
bapoulin@ucdavis.edu

Jagos Radovic
University of Houston
Houston, TX
jradovic@uh.edu

Susan Richardson
University of South Carolina
Department of Chemistry and
Biochemistry
631 Sumter Street
Columbia, SC 29208
richa545@mailbox.sc.edu

Ryan Rodgers
Nat'l High Magnetic Field Lab
FT-ICR MS Facility
1800 East Paul Dirac Drive
Tallahassee, FL 32310
rodders@magnet.fsu.edu

Christopher Ruger
University of Rostock
Albert-Einstein Strae 25
Rostock, Germany 18059
christopher.rueger@uni-rostock.de

Philippe Schmitt-Kopplin
Helmholtz Zentrum Muenchen,
Analytical BioGeoChemi
Ingoldstaeter Landstrasse
Neuherberg/oberschleisheim,
Germany 85674
schmitt-kopplin@helmholtz-
muenchen.de

Robert Spencer
Florida State University
Tallahassee, FL 32306
rgspencer@fsu.edu

Aron Stubbins
Northeastern University
Boston, MA
a.stubbins@northeastern.edu

John Stutzman
Dow Inc
MiOps
1897 Building, E90
Midland, MI 48667
jrstutzman@dow.com

Michael Sussman
University of Wisconsin
425 Henry Mall
Genetics-Biotechnology Center
Building
Madison, WI 53706
msussman@wisc.edu

Anil Timilsina
University Of Nevada Reno
1664 N Virginia St
Reno, NV 89557
tanil@nevada.unr.edu

Clifford Walters
ExxonMobil Research &
Engineering
1545 Route 22 East
Annandale, NJ
ccwalters925@gmail.com

Collin Ward
Woods Hole Oceanographic
Institute
Falmouth, MA
cward@whoi.edu

Brent Watson
ASMS
2019 Galisteo St., Bldg i-1
Santa Fe, NM 87505
brent@asms.org

Chad Weisbrod
National High Magnetic Field
Laboratory
1800 E. Paul Dirac Dr.
Tallahassee, FL 32310
weisbrod@magnet.fsu.edu

Andrew Wozniak
University of Delaware
Newark, DE 19716
awozniak@udel.edu

Yudi Wu
Florida Polytechnic University
4700 Research Way
Lakeland, FL 33805
ywu@floridapoly.edu

Robert Young
New Mexico State University
1818 Salinas Dr.
Las Cruces, NM
rbyoung@nmsu.edu



UPCOMING EVENTS

June 2 – 6, 2024

72nd ASMS Conference on Mass Spectrometry and Allied Topics

Anaheim Convention Center | Anaheim, CA

Abstract Deadline is February 2, 2024



October 11 – 15, 2024

39th Asilomar Conference on Mass Spectrometry New Frontiers in Ion Mobility-Mass Spectrometry from Applications to Instrumentation

Asilomar Conference Center | Pacific Grove, CA

Organizers

Erin Baker, *University of North Carolina*, Brian Clowers, *Washington State University*
and John McLean, *Vanderbilt University*

November 18 – 19, 2024

35th Fall Workshop on Mass Spectrometry Native Mass Spectrometry

Sheraton Boston Hotel | Boston, MA

Organizers

Brandon Ruotolo, *University of Michigan*, David Russell, *Texas A&M University*
and Vicki Wysocki, *The Ohio State University*