

**56th Annual
SAS/ACS/AVS May Conference
Technical Partner with MSNO**

**May 23, 2012
John Carroll University
Dolan Science Center**

FINAL PROGRAM

- 7:00 a.m.** **Registration/Continental Breakfast:**
(Edward M. & Ann Muldoon Atrium)
- 8:00 a.m.** **Opening Remarks:** (Donahue Auditorium)
Brian Perry, President, SAS Cleveland Section

Mike Setter, Department Chair, Chemistry, John Carroll
University
- 8:15 a.m.** **Invited Address 1:** (Donahue Auditorium)
Chair: Brian Perry

Melissa Knotte Tate, *Case Western Reserve University*

**“Transcontinental and Transdisciplinary Approaches to
Tackling the Toughest Research Questions: Mechanomics
to Engineering Emergence”**
- 9:15 a.m.** **Break (15 minutes):** (Edward M. & Ann Muldoon Atrium)

Presentation Session I

	Session IA Dolan A202 Chair: Robert Williams	Session IB Dolan A203 Chair: Rick Kus	Session IC Dolan E130 Chair: Grahame Kidd
9:30 a.m.	IA-1 Chemometric Correlation Between Potentiometric Titration and FT-IR Spectroscopic Determinations of the Basic Additive Packet Content of In-Use Lubricating Oils Regan Silvestri <i>Baldwin-Wallace University</i>	IB-1 "Grease Degradation in Critical Helicopter Drivetrain Bearings" Ken Street <i>NASA-Glenn</i>	IC-1 "Virus-Misplaced Host Protein Activates Innate Immunity" Justin Flatt <i>CWRU</i>
10:00 a.m.	IA-2 "Advances in FT-IR" Ron Rubinovitz <i>ThermoFisher Scientific</i>	IB-2 "Visualizing Capsaicinoids: Simple Color Tests for Determining the "Heat" of a Chili Pepper" Robert Thompson <i>Oberlin College</i>	IC-2 "New Information from Large Tissue Volumes to the Smallest Structures of the Cell what New Methods and Electron Microscopy can do for Your Research" Rich Gursky <i>FEI</i>
10:30 a.m.	IA-3 "Handling Difficult Matrix – GC FID Analysis of PMX-0244 and PMX-0245 in Vinyl Terminated Polydimethylsiloxane" Max Wang <i>Shimadzu</i>	IB-3 "Environmental Contaminants in Storm Water Run Off and Methods to Treat" Paul Edmiston <i>The College of Wooster</i>	IC-3 "Engineering a Rod-Shaped Plant Virus with Potential Optical and Biomedical Applications" Michael Bruckman <i>CWRU</i>

11:00 a.m. Break (10 minutes): (Edward M. & Ann Muldoon Atrium)

11:10 a.m. Yeager Award: (Donahue Auditorium)
Chair: Doug Rohde

TBD, TBD

"College"

11:40 p.m. Lunch: (Dolan Reading Room)

12:15 p.m. Poster Session : (Hallway)

Presentation Session II

	Session IIA Dolan A202 Chair: Wayne Jennings	Session IIB Dolan A203 Chair: Amir Avishai	Session IIC Dolan E130 Chair: Karen McGuire
1:15 p.m.	<p>IIA-1</p> <p>"Freezing of Water Next to Solid Surfaces Probed Using Sum-Frequency Generation Spectroscopy"</p> <p>Emmanuel Anim-Danso <i>UAkron</i></p>	<p>IIB-1</p> <p>"Characterization of Precipitate Evolution in Ferritic Weld Metal"</p> <p>Ben Schaeffer /Badri Narayanan <i>Lincoln Electric</i></p>	<p>IIC-1</p> <p>"Cryo-image Analysis of Tumor Cell Migration, Invasion, and Dispersal in a Mouse Xenograft Model of Human Glioblastoma Multiforme"</p> <p>Mohammed Qutaish <i>CWRU</i></p>
1:45 p.m.	<p>IIA-2</p> <p>"ToF-SIMS and XPS Comparative Study on the Characterization of Adsorption Film Formed by Tolytriazole Corrosion Inhibitor on Cu in Oily Media"</p> <p>Avidipto Biswas <i>CWRU</i></p>	<p>IIB-2</p> <p>"Low Temperature Gas Phase Nitriding of Stainless Steel 316"</p> <p>Dandan Wu <i>CWRU</i></p>	<p>IIC-2</p> <p>Single Cell Molecular Recognition of Migrating and Invading Tumor Cells using a Targeted Fluorescent Probe to Receptor PTPmu</p> <p>Susan M. Burden-Gulley <i>CWRU</i></p>
2:15 p.m.	<p>IIA-3</p> <p>"Erosive Wear Characterization of Materials for Lunar Construction"</p> <p>Ken Street <i>NASA-Glenn</i></p>	<p>IIB-3</p> <p>"Advanced High Strength Steel through Paraequilibrium Carbon Partitioning and Austenite Stabilization"</p> <p>Hao Qu <i>CWRU</i></p>	<p>IIC-3</p> <p>"Serial Blockface Scanning EM: 3D Ultrastructural EM for Confocal Microscopists"</p> <p>Grahame Kidd <i>Cleveland Clinic</i></p>
2:45 p.m.	<p>IIA-4</p> <p>"Using Direct Sample Analysis/TOF MS to analyze everything from Polymers to Pharmaceuticals in as little as 10 seconds per sample"</p> <p>Bob Stroyne <i>PerkinElmer</i></p>	<p>IIB-4</p> <p>"TEM Investigation of Butterfly and White Etching Area Formed During Rolling Contact Fatigue"</p> <p>Vikram Bedekar <i>Timken</i></p>	<p>IIC-4</p> <p>"Radio Frequency-Tunable Drug Release in Tumors using a Multi-Component Nanochain"</p> <p>Pubudu Peiris <i>CWRU</i></p>

3:15 p.m. Break (15 minutes): (Edward M. & Ann Muldoon Atrium)
Presentation Session III

	Session IIIA Dolan A202 Chair: Regan Silvestri	Session IIIB Dolan A203 Chair: Amir Avishai	Session IIIC Dolan E130 Chair: Jeanne Petko
3:30 p.m.	<p>IIIA-1</p> <p>“Design Considerations for an all new ICP-MS platform”</p> <p>Michael Plantz <i>ThermoFisher Scientific</i></p>	<p>IIIB-1</p> <p>“ASTAR: Automated Orientation Imaging in the Transmission Electron Microscope”</p> <p>Amith Darbal <i>Nanomegas</i></p>	<p>IIIC-1</p> <p>“Nanoscale Contacts and Reliability Study in Nanomechanical Switches”</p> <p>Ting He <i>CWRU</i></p>
4:00 p.m.	<p>IIIA-2</p> <p>“A New Solid-Phase Extraction Method for Cadmium Determination by GFAAS”</p> <p>Alison O’Connor <i>Oberlin College</i></p>	<p>IIIB-2</p> <p>“Electrodynamics of Nanoscale Assembly”</p> <p>Roger French <i>CWRU</i></p>	<p>IIIC-2</p> <p>“Optical Microscopy-A Practical Approach for Today’s Applications Basics and Beyond”</p> <p>Jay Mansbach <i>B&B Microscopes</i></p>
4:30 p.m.	<p>IIIA-3</p> <p>“Flavor and Aroma Compounds in Fermented Beverages by GC-MS”</p> <p>Allan Gallaspy <i>PerkinElmer</i></p>	<p>IIIB-3</p> <p>“Specimen Preparation by Argon Ion Milling for a Wide Variety of SEM and TEM Applications”</p> <p>Paul Fischione <i>Fischione</i></p>	<p>IIIC-3</p> <p>“Plasma-Based Synthesis of Nanoscale Materials “</p> <p>Ajay Kumar <i>CWRU</i></p>
5:00 p.m.	<p>IIIA-4</p> <p>“Sensitive Determination of Extractable Glycidyl Methacrylate (GMA) from Cured Coating with a Single Transmission GCMS QP2010Ultra”</p> <p>Max Wang <i>Shimadzu</i></p>	<p>IIIB-4</p> <p>“Recent development in sub-nanometer resolution imaging of thermotropic liquid crystals”</p> <p>Min Gao <i>Kent State University</i></p>	<p>IIIC-4</p> <p>“A microscopic perspective to extant and dinosaur color”</p> <p>Liliana D’Alba <i>UAKron</i></p>

5:30 p.m. Break (15 minutes): (Edward M. & Ann Muldoon Atrium)

- 5:45 p.m.** **Best Student Paper/Poster Awards** (Donahue Auditorium)
Presenters: Tom Steele
- 6:00 p.m.** **Morley Lecture** (Donahue Auditorium)
Chair: Mark Waner
- Malcolm H. Chisholm**, The Ohio State University
- “Towards Molecular Infomatics: Studies of Mixed Valency and $M_2\delta-\pi$ Conjugation”**
- 7:00 p.m.** **Reception** (Edward M. & Ann Muldoon Atrium)
- 7:30 p.m.** **Program** (Dolan Reading Room)
- Recognition of Meeting Sponsors** – Bob Williams
- 50-Year ACS Member Recognitions** – Kat Wollyung
- Bell Award Presentations** – Tom Steele,
- Morley Award Presentation** – Mark Waner
- Closing Comments** – Brian Perry
- 7:50 p.m.** **Dinner** (Dolan Reading Room)