

## 2025 May Conference Presentations (tentative, updated on 4/21/2025)

**Keynote:** Cheri Hampton - AFRL

From Inner Space to Outer Space: A Journey in Electron Microscopy Applications

**Yeager:** Kayla Poling – Case Western Reserve University

### Oral Presentations

1. Andres Marquez – Oak Ridge National **(INVITED)**  
A Microscopic History of Additive Manufacturing through the Lens of 316SS
2. Megan Macnaughtan – John Carroll University **(INVITED)**  
Unraveling the Dual Nature of a *C. trachomatis* Protein with NMR and Chromatography
3. Zachery Oestreicher – Miami (Ohio) University **(INVITED)**  
Using Immunolabeling to Understand Proteins Involved with Biomineralization of Magnetite in Magnetotactic Bacteria
4. Jae Yang – University of Wisconsin - Madison **(INVITED)**  
Advancing Integrative Cryo-EM to Study in-situ Crystalline Structure of the Human Eosinophil Major Basic Protein-1
5. Eugene Pashkovski – Lubrizol **(INVITED)**  
Application of ultrafast video imaging for characterizing elastocapillary thinning and rotary fluid atomization
6. Jennifer McDonough – Kent State University **(INVITED)**  
CARs Imaging to Understand Remyelination in Multiple Sclerosis
7. Jay Amicangelo – Penn State Erie  
Investigation of the Effect of H Atom Precursor on the Yield of the C<sub>6</sub>H<sub>7</sub> Radical in an Argon Matrix Using Matrix Isolation Infrared Spectroscopy
8. Jocelyn Mateo and Andrew Nagy – Lorain County Community College  
Quantifying Antioxidants in Non-Alcoholic Beers
9. Brett Ley – Case Western Reserve University  
Defect-Driven Fatigue Behavior in LPBF Ti-6Al-4V: Insights from Fractographic Analysis

## Oral Presentations

10. Samuel Tosin – Case Western Reserve University  
Empirical Insights into Fungal Sensory and Communication Abilities
11. Arvind Singh Heer – Case Western Reserve University  
Ohmic Microscopy of Electrochemically Induced CO Oxidation
12. Brian Strohmeier – Pittcon Conference and Exposition  
Surface and In-depth Characterization of Polymeric Materials Using X-ray Photoelectron Spectroscopy (XPS) Combined with Argon Cluster Ion Sputtering
13. Myxie Tana Rogado – Case Western Reserve University  
The Evolution and Development of Lipid Nanoparticles as Therapeutic Carriers
14. Zoey Lockwood – Case Western Reserve University  
Optimizing the Optical and Therapeutic Performance of Indocyanine Green for Cancer Imaging and Treatment
15. Hemal Weerasinghe – Case Western Reserve University  
Synthesis and Development of Water-stable All Inorganic Perovskite Quantum Dots for Multi-photon Fluorescence Bio-Imaging
16. Md Sirajul Islam – Case Western Reserve University  
Sulfur-doped MXene Quantum Dots for Pb<sup>2+</sup> Detection Using Fluorescence Quenching
17. Kate Vanderburgh – Thermo Fisher Scientific (**VENDOR**)  
Analytical Strategies Using SEM and Correlative Software for Comprehensive Characterization
18. Michael Ulatowski – Shimadzu Scientific Instruments (**VENDOR**)  
A Simple, Effective Solution for Characterization and Quantification of Microplastics by PY-GC/MS
19. Kayleigh Harvey – JEOL USA, Inc. (**VENDOR**)  
Turning Minerals into Smartphones: FE-EPMA Advances Critical Materials Research
20. David Sampson – Tescan US (**VENDOR**)  
Beyond Traditional Computed Tomography. New advances in X-Ray Computed Tomography
21. Justin Zimmerman – Case Western Reserve University  
Experimental Design for In-Vitro Simulation and Evaluation of Cardiovascular Pacing Lead Failure

## **Oral Presentations**

22. Alexandria Miskey – Case Western Reserve University  
Aerosol Jet Printing Challenges for an Instrumented Pressure Sensing Prosthetic Liner
  
23. Aaron Niño Gonzaga – Case Western Reserve University  
Thermodynamic Water Activity Explains the Unusual Electrochemical Stability of Aqueous Deep Eutectic Solvents
  
24. Alan Chen – Lerner Research Institute  
X-Ray Photoelectron Spectroscopy Investigation of the Interaction between Oxidized Fullerene and Proteinogenic Amino Acids
  
25. Lavanya Jain – The Cleveland Clinic Foundation  
Microscopy-Guided Analysis of Ligand-Dependent Gold Nanoparticle Binding on Human Kidney Stones
  
26. Janet Gbur – Case Western Reserve University  
Mechanical Evaluation and Characterization of Neuromodulation Electronics Connections
  
27. Hairou Yu – Case Western Reserve University  
Azimuthally Resolved Scattering Morphology Resolved Total Internal Reflection Microscopy (SMR-TIRM) of Anisotropic Colloidal Particles
  
28. Olivia Bogna – Lorain County Community College  
Locating PSR B0904+77 Using Regional Spectral Data from Astronomical Surveys

## Poster Presentations

1. John Kim – CWRU (SCSAM)  
XPS and ToF-SIMS Depth Profile Analyses of Battery Cathode Material, LiCoO<sub>2</sub> (LCO)/SrRuO<sub>3</sub> (SRO)
2. Abbey Boyer – University of Dayton  
Design and Testing of CubeSat Radiator Prototype
3. Peyton Mann – Youngstown State University  
Dynamic Control of a Polymer-Dispersed Liquid Crystal Film for Use in Smart Greenhouses
4. Gracie Crnjak – Lorain County Community College  
Tiny Earth: Course-Based Undergraduate Research Experience to Isolate Novel Antimicrobial Product
5. Aliya Ali – Lorain County Community College  
Targeting CCR5 function as a Therapy for AIDS
6. Nabeel Liaqat – Case Western Reserve University  
Microstructural and Mechanical Impact of Carbonated Slag Aggregate in Mortar
7. Desiree Mae Prado – Case Western Reserve University  
Breakthrough Conductivity Enhancement in Deep Eutectic Solvents via Grotthuss-type Proton Transport
8. Colin Ely – Penn State Behrend  
Fungal Degradation of Plastic Waste
9. Jocelyn Mateo – Lorain County Community College  
Detecting Hydrogen Emission from the Galactic Plane Using a Feedhorn Telescope
10. Alena Espinosa Alvernia – Lorain County Community College  
Development of Therapies to Target Neuroinflammation
11. William Chang – Case Western Reserve University  
Applying a Plasma Activated Silver Salt Ink to Aerosol Jet Printing

## **Poster Presentations**

12. Hamza Shaili – Case Western Reserve University  
Photophysical Properties of Perovskite Nanocrystals for Light Emitting Applications
  
13. Anuvi Gupta – Case Western Reserve University  
Characterization of an aerosol jet printed circuit used in a high-density implantable connector for neuroprosthetics
  
14. Aidan D. Selkirk - Case Western Reserve University  
Image Analysis for Optimizing Aerosol Jet Printed Circuits