

AVS 67th INTERNATIONAL SYMPOSIUM & EXHIBITION

Symposium: October 24-29, 2021 | Exhibit: October 26-28, 2021

CHARLOTTE CONVENTION CENTER • CHARLOTTE, NORTH CAROLINA, USA



“Advances in Interfacial Science for Energy and the Environment”

Technical and Poster Sessions - Short Courses – Exhibits

Call for New Trends in Structural Electronic Characterization of Materials, Interfaces, and Surfaces Using Synchrotron and FEL Based Light Sources Abstracts

Abstract Deadline May 3, 2021

The increasing need for energy coupled with growing concerns about climate change is one of the greatest challenges of our society. Renewable energy is one of the solutions to replace fossil fuels, but sustainability imposes combination with efficient conversion and storage. Notwithstanding the vast R&D activities the technology has not reached the maturity to comprise the high-conversion and high-power range due to the fact that successful operation of solar cells and batteries is determined by numerous physical, chemical, electrical and thermal processes, occurring over wide spatial and temporal ranges. One of the most

promising guides for solving technology problems is to understand the evolving device properties via in-situ and operando analyses and here the synchrotron and FEL-based methods have become indispensable tools to provide rational guidelines for technological breakthroughs. New insights into the governing processes that are crucial for development of engineering strategies for the next generation energy devices have been attained via operando synchrotron and FEL-based methods and will be presented by the selected speakers in the LS sessions.

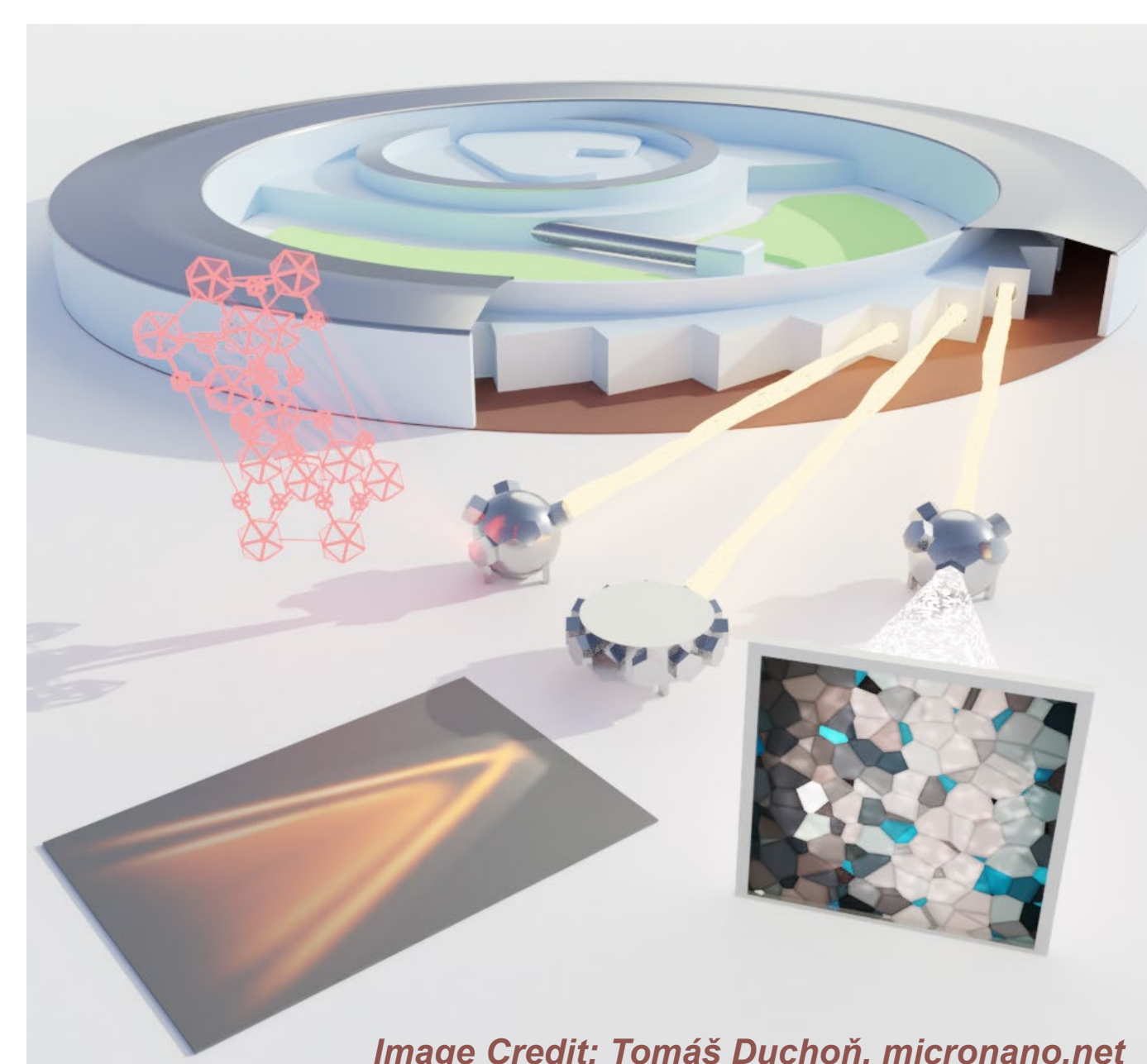


Image Credit: Tomáš Duchoň, micronano.net

Topics & Speakers

LS1+2D+MI: Magnetism Dichorism and Spin-Resolved Techniques of Magnetic Materials

- *Nicholas Brookes*, European Synchrotron Radiation Facility, France, “Soft X-ray Resonant Inelastic Scattering (RIXS) to Study the Magnetic and Electronic Properties of Materials”
- *Mikel Holcomb*, West Virginia University, “My Adventures with Synchrotrons: From Discovering New Types of Magnetism to Helping NASA”

LS2+2D+MI+SS: Photoemission spectroscopy Applied to Interfacial Science

- *Gerd Schönhense*, Johannes Gutenberg-Universität, Mainz, Germany, “Bulk and Interface Hard-X-ray Bandmapping with Spin Resolution Combining Full-field Momentum Imaging with ToF-recording”
- *Shigenori Ueda*, National Institute for Materials Science, Japan, “Variable X-ray Polarization, External Magnetic Field, and Spin-resolution for Buried Interfaces by Hard X-ray Photoemission”

LS3+CA+MI+SE+SS: Microscopy and Imaging Techniques Exploiting Enhance Coherence Properties

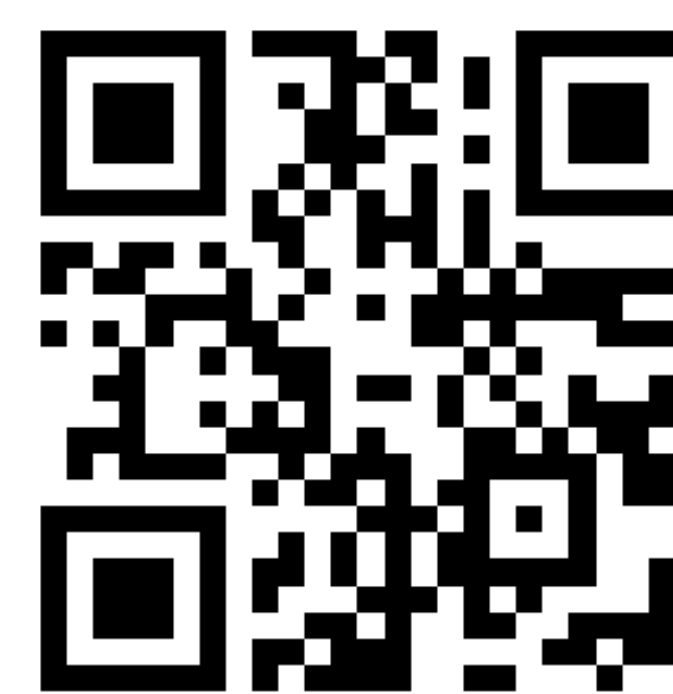
- *Ana Diaz*, Paul Scherrer Institut (PSI), Switzerland, “Non-Destructive Nanotomography of Materials using X-Ray Ptychography”
- *Mark Sutton*, McGill University, Canada, “Extending Time-Resolved X-Ray Diffraction using Coherence”

LS4+2D+SS: Structural Characterization of Energy Materials

- *Ute Cappel*, KTH Royal Institute of Technology, Sweden, “Time-Resolved Photoelectron Spectroscopy of Solar Cell Materials”
- *Alex Frano*, University of California at San Diego, “The ‘Quantumness’ of Quantum Materials Understood Via Resonant X-Ray Scattering”

LS5: New Trends in Structural Electronic Characterization of Materials, Interfaces, and Surfaces Using Synchrotron and FEL Based Light Sources Poster Session

Submit Online



www.avs.org/symposium

Awards Opportunities

All award applications for AVS National and Division/Group awards may be found at the following link: (<http://www.avs.org/awards>). Please contact Angela Klink, Member Services Administrator, (angela@avs.org, 212-248-0200 ext. 221) for any additional information.

Each year, the AVS solicits nominations for eight graduate student awards. These are the Russell and Sigurd Varian Award, the Nellie Yeoh Whetten Award, the Dorothy M. and Earl S. Hoffman Award, two Dorothy M. and Earl S. Hoffman Scholarships (N.B. the Hoffman Award and Scholarships are distinct from the Hoffman Travel Grants described below) and three Graduate Research Awards. The nomination procedures are on www.avs.org or through Angela Klink (212-248-0200, ext. 221 or angela@avs.org) Applicants should use the AVS online award submission site. **The deadline is May 3, 2021.**

AVS 67 Conference Website www.avs.org/symposium