

Catalysis Research at APS-U - October 3-4, 2019

Thursday, October 3, 2019 - APS Building 402, Room E1100 & E1200

- 9:00 – 9:05 Welcome, Jonathan Lang, XSD Division Director, APS/ Argonne National Laboratory
- Session Chair:** Mali Balasubramanian, Argonne National Laboratory
- 9:05 – 9:15 **Dean Haeffner**, APS-U Project: Facts
- 9:15 – 9:50 **Jier Huang**, Marquette University
Direct Observation of Charge Separation and Transport in Zeolitic Imidazolate Frameworks using Transient Absorption Spectroscopy
- 9:50 – 10:25 **Elisa Biasin**, Pulse Institute, Stanford
Time-resolved x-ray scattering observes ultrafast photo-induced structural dynamics of solvated transition-metal complexes
- 10:25 – 10:45 Break
- 10:45 – 11:20 **Dugan Hayes**, Univ. Rhode Island
Mechanistic insights into the copper-catalyzed photocycloaddition reaction by X-ray transient absorption spectroscopy
- 11:20 – 11:55 **Renske van der Veen**, Dept. of Chemistry, University of Illinois at Urbana
Unraveling atomic-scale dynamics in solar energy conversion using fast electrons and hard X-rays
- 11:55 – 12:15 Discussion
- 12:15 – 13:30 Working Lunch & Discussion for Report preparation – Ercan Alp
- Session Chair:** Debbie Myers, Argonne National Laboratory
- 13:30 – 14:05 **Edward Solomon**, Stanford University
Geometric and Electronic Structural Contributions to Fe/O₂ Reactivity via NRVS and MCD Measurements
- 14:05 – 14:40 **Yisong Guo**, Carnegie-Mellon University
Nuclear Resonance Vibrational Spectroscopy Studies of High Valent Iron Complexes Relevant to Small Molecule Activation
- 14:40 – 15:15 Discussion
- 15:15 – 15:35 Break
- 15:35 – 16:10 **Michael Organ**, University of Ottawa, Canada
- 16:10 – 16:45 **Mali Balasubramanian**, APS / Argonne National Laboratory
X-ray Spectroscopy & Catalysis Research
- 16:45-17:15 Discussion
- 18:00 – 20:00 Working dinner – APS Lower Level Gallery

Friday, October 4, 2019 - APS Building 402, Room E1100 & E1200

- Session Chair:** Deborah Meira, CLS@APS
- 9:00 – 9:35 **Deborah Myers**, Argonne National Laboratory
X-ray Absorption, Scattering, Tomography, and NRVS Studies of Platinum Group Metal-free ORR Catalysts and Electrodes
- 9:35 – 10:10 **Massimiliano Delferro**, Argonne National Laboratory
XAS for Supported Organometallic Catalysts
- 10:10 – 10:30 Break
- 10:30 – 11:05 **Fabio H. Riberio**, Purdue University
Reaction mechanism and the nature of the active site for standard selective catalytic reduction of NO_x on Cu/SSZ-13 zeolites
- 11:05 – 11:40 **Susannah Scott**, UC Santa Barbara, CenSURF: Center for the Sustainable Use of Renewable Feedstocks
- 11:40 – 12:15 **Liu Bin**, Nanyang Technological University, Singapore
A Design Principle for Oxygen Electrocatalysts
- 12:15 – 12:50 **Simon Bare**, Stanford University
X-Ray Absorption Spectroscopy and Catalysis: Past, Present and Future
- 12:50– 13:50 Working Lunch & Discussion for Report preparation – Ercan Alp
- 13:50 – 15:00 Discussion and report writing
- 15:00 Adjourn