DIFFERENTIAL ELECTROCHEMICAL MASS SPECTROMETRY- A review of real time, in situ mass resolved determination of gaseous and volatile electrochemical reactants, reaction intermediates, and products from electrochemical processes

MEETING AGENDA

DATE: TUESDAY 15TH OCTOBER 2024

LOCATION: ROOM 118 IN THE AGRICULTURAL SCIENCE AND INDUSTRIES BUILDING

TIME	TOPIC	SPEAKER
8.30-9.00AM	Coffee and Registration	Room 118 ASI
9:00-9:15 AM	Welcome and Opening Remarks	Mark Buckley Hiden Analytical Inc
9:15-9:45AM	A Short History of Hiden DEMS: From Poitiers to Penn State	Jim Melling Hiden Analytical
9:45-10:30 AM	Insights into the Electrochemical Reduction of Carbon Dioxide with Differential Electrochemical Mass Spectrometry	Professor Ezra Clark, Penn State University, Pennsylvania
10:30-10:45	Morning Refreshment Break	118 ASI
10:45-11:30 AM	Elucidating the Origins of Electrocatalytic Phenomena using Steady State Isotopic Transient Kinetic Analysis	Abigail R. Circelli Penn State University, Pennsylvania
11:30-12:15 PM	Dynamic Electrochemistry: Unraveling Electrochemical Processes with In-Situ DEMS	Professor Mohammad Asadi Illinois Institute of Technology, Chicago

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12:15-1:15 PM	Lunch	Room 118 ASI
1:15-2:00 PM	Molecular-level elucidation of electroreduction mechanisms over single-atom-doped nanocrystal catalysts	Professor Xingchen Ye Indiana University
2:00-2:10 PM	Walk to Chemical and Biomedical Engineering Building	
2:10-2:30 PM	Laboratory Tour and Instrument/Application Demonstration	Chemical and Biomedical Engineering Building
2:30-2:40 PM	Walk back to 118 ASI	
2:40-3:00 PM	Question & Answers/Afternoon Refreshment Break	118 ASI
3:00-3:45 PM	Enhanced calibration techniques and design considerations for accurate differential electrochemical mass spectrometry (DEMS)	Mark Kazour, Sietz Group, Northwestern University, Illinois
3:45-4:30 PM	Theoretical and practical considerations for rigorous on-line mass spectrometry for electrochemical kinetics	Todd Whittaker University of Colorado, Boulder
4:30-4:45 PM	Closing Remarks	Mark Buckley Hiden Analytical Inc