Organizing Committee

- Prof. Anne Co, OSU, Chair
- Prof. Daniel Scherson Case, Co-Chair
- Dr. James Wu, NASA Glenn, Program Chair
- Dr. Maria Inman, Faraday Technology, Treasurer
- Prof. Gerardine Botte, Ohio U, Poster Session Chair
- Prof. James Burgess, Case, Student Chapter Liaison
- Dr. EJ Taylor, Faraday Technology, Industry Liaison
- Prof. Mekki Bayachou, Poster Session Co-Chair

ECS Student Chapter Representatives

- Ms. Katie Muhlenkamp, OSU
- Mr. Ali Estejab, Ohio U
- Mr. Stephen Banik, Cleveland/YCES
- Mr. Kunal Kumar, UC

ElectrochemOhio 2014

September 19-20, 2014
Ohio State University, Columbus, OH

PROGRAM

THE OHIO STATE UNIVERSITY

NASA

1804 OHIO UNIVERSITY

ECS the society for solid-state and electrochemical science and technology

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Program

Friday, September 19th, 2014

Physics Research Building Atrium (191 W. Woodruff Ave)

12:30 pm Registration desk opens at the Physics Research Building Atrium

1:00-2:30 Tour of OSU Center for Automotive Research (CAR) including brief battery research presentation by Prof. Giorgio Rizzoni, Director of CAR (**Meet at 1 pm at the Registration Desk and car pool to CAR, or meet at 1:15 pm at CAR)**

2:30-2:40 Introduction and Opening Remarks for ElectrochemOhio 2014

SESSION I Chair: Prof. Anne Co

2:40-3:20 **Plenary Talk** – Dr. Khalil Amine, Argonne National Lab, *Advanced High Energy and High Power Battery Systems for Automotive Applications*

3:20-3:50 Prof. Umit Ozkan, Chemical and Biomolecular Engineering, OSU, *Strontium Cobalt Ferrite Perovskites as Electrocatalysts for Solid Oxide Fuel Cells: Effect of the A- and B-Site Substitution*

3:50-4:20 Dr. Andy Webber, Energizer, *Recent Advances in Primary Lithium Batteries at Energizer*

4:20-4:30 Break

SESSION II Chair: Prof. Jim Burgess

4:30-5:00 Prof. Hannah Shafaat, Chemistry and Biochemistry, OSU, *Electrocatalytic Hydrogen Production Performed by Model Protein Scaffolds*

5:00-5:15 Fei Lu, Ohio University *Electrochemically Induced Conversion of Urea to Ammonia*

5:15-5:30 Brandon W. Whitman, Michigan State University *Understanding the Structure and Corrosion Inhibition of Trivalent Chromium Process Coatings on Aluminum Alloys*

5:30-5:45 Mingzhe Yu, Chemistry and Biochemistry, OSU *Integrating a Redox-Coupled Dye-Sensitized Photoelectrode into a Lithium-Oxygen Battery for Photo-Assisted Charging*

5:45-6:00 Cory A. Rusinek, University of Cincinnati *Cloud Point Extraction for Electroanalysis: Anodic Stripping Voltammetry of Cadmium*

6:00-7:30 Student Poster Session and Dinner

Program

Saturday, September 20th, 2014

McPherson Chemical Lab Room 1000 (140 W. 18th Ave)

Session III Chair: Dr. EJ Taylor

9:10-9:50 **Plenary Talk** – Prof. Andy Gewirth, Chemistry, UIUC, *Techniques in Surface Electrochemistry and Their Relationship to Energy Research*

9:50-10:20 Prof. Uziel Landau, Chemical Engineering, CWRU, *The Technology and Science of Electroplating Nano-Features*

10:20-10:30 Break

Session IV Chairs: Profs. Gerardine Botte and Mekki Bayachou

10:30-10:45 Student finalist presentation 1
10:45-11:00 Student finalist presentation 2
11:00-11:15 Student finalist presentation 3
11:15-11:30 Student finalist presentation 4

Session V Chair: Dr. James Wu

11:30-12:00 Prof. Gerald Frankel, Material Sciences and Engineering, OSU *Mechanism of Hydrogen Evolution on Dissolving Mg Surfaces*

12:00-1:30 Catered lunch

1:30-2:00 Prof. Shigeru Amemiya, University of Pittsburgh. *Electrochemistry of Ultraclean Graphene and Graphite: Recent Progress*

2:00-2:30 Prof. Gerardine Botte, Chemical and Biomolecular Engineering, Ohio University *Graphene from Coal Char: Synthesis and Applications*

2:30-3:00 Dr. Thomas Moffat, NIST, *Electrochemical Deposition of Pt-(Fe, Co, Ni) Alloys: Self-Terminated Growth to Underpotential Co-Deposition*

Session VI Chair: Dr. Maria Inman

3:00-3:30 Prof. Zhenmeng Peng, Chemical and Biomolecular Engineering, University of Akron *Surfactant-Free Production and Electrocatalytic Property of Pt Nanoparticles with Tailored Particle Morphology*

3:30-4:00 Prof. Anne Co, Chemistry and Biochemistry, OSU *Electrocatalysis of O_2 and CO_2: Monolayers, Thin films, and Porous Electrodes*

4:00-4:15 Announcement of Travel Award Winners

4:15-4:30 Concluding Remarks