

DOE CATALYSIS WORKING GROUP MEETING

Wednesday, July 27, 2016

Argonne National Laboratory, Building 241/D172

Agenda

- 8:45 Arrival
- 9:00 - 9:15 Welcome, introductions, meeting objectives –
Nancy Garland (DOE) and Piotr Zelenay (LANL)
- Fuel Cell Electrocatalysis: Needs and Paths Forward**
(Discussion lead: Piotr Zelenay)
- 9:15 - 10:15 *State of the Art and Challenges Facing Low-Temperature
Fuel Cell Electrocatalysis* – Vojislav Stamenkovic (ANL)
- 10:15 - 10:45 *Industrial Perspective on Fuel Cell Electrocatalysts* –
Dustin Banham (Ballard)
- 10:45 - 11:00 Break
- Catalyst Characterization and Testing**
(Discussion lead: Debbie Myers)
- 11:00 - 11:30 *Operando IR and Raman Spectroscopy of the Catalyst-
Ionomer Interface* – Eugene Smotkin (NuVant Systems)
- 11:30 - 12:00 *Modeling of PGM-free Cathodes* – Scott Calabrese Barton
(Michigan State University)
- 12:00 - 12:30 *Methodologies for Accelerated Stress Tests of PGM-free
Catalysts* – Lior Elbaz (Bar-Ilan University)
- 12:30 - 1:30 Lunch (no host; Argonne Guest House cafeteria)
- Electrodes: Electrocatalysis vs. Mass Transport**
(Discussion lead: Sanjeev Mukerjee)
- 1:30 - 2:00 *Examinations of Kinetic and Transport Losses in Low Pt
Electrodes* – Kenneth (K.C.) Neyerlin (NREL)
- 2:00 - 2:30 *The Challenge of Mass Transport Resistance in Fuel Cell
Catalyst Layers and Resulting Poor Performance at High
Current Density* – Di-Jia Liu (ANL)
- 2:30 - 3:00 *Local Transport in Absence of Ionomer: High Surface Area
Supports and Ionomer-free Electrodes* – Shawn Litster
(Carnegie Mellon University)
- 3:00 - 3:15 Break

Brief Introductions of the Latest FCTO-funded Research Projects

(Discussion lead: Nancy Garland)

- 3:15 - 4:30 *Platinum Monolayer Electrocatalysts* – Radoslav Adzic (BNL)
Extended Surface Electrocatalyst Development – Kenneth (K.C.) Neyerlin (NREL)
Highly Active Durable, and Ultra-Low PGM NSTF Thin Film ORR Catalysts and Supports – Andy Steinbach (3M)
Highly-Accessible Catalysts for Durable High-Power Performance – Anu Kongkanand (GM)
Corrosion-Resistant Non-Carbon Electrocatalyst Supports for PEFCs – Plamen Atanassov (UNM)

- 4:30 - 5:00 Wrap-up, action items, discussion of the date, location and topic of the next CWG meeting – Piotr Zelenay and Nancy Garland
- 5:00 Adjourn

- 7:00 No host dinner, “Greek Islands” restaurant in Lombard, IL