

# Fuel Cell Projects Kickoff Meeting

## Agenda

September 30<sup>th</sup>, 2009

1:00	Opening Remarks	Henry Kelly
1:10	Program Overview	Sunita Satyapal Dimitrios Papageorgopoulos
1:30	Reporting Requirements	Dave Peterson
<b>Catalysts</b>		
1:40	Nanosegregated Cathode Catalysts with Ultra-Low Platinum Content	Nenad Markovic, ANL
2:00	Extended, Continuous Pt Nanostructures in Thick, Dispersed Electrodes	Bryan Pivovar, NREL
2:20	Contiguous Monolayer Oxygen Reduction Electrocatalysts on High-Stability-Low-Cost Supports	Radoslav Adzic, BNL
2:40	The Science and Engineering of Durable Ultralow PGM Catalysts	Fernando Garzon, LANL (Brosha)
3:00	Molecular-scale, Three-dimensional Non-Platinum Group Metal Electrodes for Catalysis of Fuel Cell Reactions	John Kerr, LBNL (Weber/Zelenay)
3:20	Durable Catalysts For Fuel Cell Protection During Transient Conditions	Radoslav Atanasoski, 3M
3:40	Break	
<b>Transport</b>		
4:10	Transport Studies Enabling Efficiency Optimization of Cost-Competitive Fuel Cell Stacks	James Cross, Nuvera
4:30	Fuel Cell Fundamentals at Low and Subzero Temperatures	Adam Weber, LBNL
4:50	Development and Validation of a Two-phase, Three-dimensional Model for PEM Fuel Cells	Ken Chen, SNL
5:10	Air-Cooled Stack Freeze Tolerance	Mike Parsons, Plug Power
5:30	Transport Studies and Modeling in PEM Fuel Cells	Cortney Mittelsteadt, Giner

October 1<sup>st</sup>, 2009

**Durability**

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|-------|--|--------------------------------------|
| 8:30  | Durability Improvements Through Degradation Mechanism Studies  | Rod Borup, LANL                      |
| 8:50  | Polymer Electrolyte Fuel Cell Lifetime Limitations: The Role of Electrocatalyst Degradation                                    | Debbie Myers, ANL                    |
| 9:10  | Development of Micro-Structural Mitigation Strategies for PEM Fuel Cells: Morphological Simulation and Experimental Approaches | Silvia Wessel, Ballard               |
| 9:30  | Durability of Low Pt Fuel Cells Operated at High Power Density   | James Cross, Nuvera                  |
| 9:50  | Break  |                                      |
| 10:20 | Improved AST's Based on Real World FCV Data  | Tom Madden, UTC                      |
| 10:40 | Accelerated Testing Validation   | Rangachary Mukundan, LANL            |
| 11:00 | Effect of System and Air Contaminants on PEMFC Performance and Durability  | Huyen Dinh, NREL                     |
| 11:20 | The Effect of Airborne Contaminants on Fuel Cell Performance and Durability  | Rick Rocheleau, University of Hawaii |
| 11:40 | Lunch  |                                      |

**Innovative Concepts**

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|------|---|---------------------------------------|
| 1:00 | Engineered Nano-scale Ceramic Supports for PEMFCs                               | Eric Brosha, LANL                     |
| 1:20 | Metallic Bipolar Plates with Composite Coatings                                 | Jennifer Mawdsley, ANL                |
| 1:40 | Resonance-Stabilized Anion Exchange Polymer Electrolytes                        | Yu Seung Kim, LANL                    |
| 2:00 | Low Cost PEM Fuel Cell Metal Bipolar Plates                                     | Conghua Wang, TreadStone Technologies |
| 2:20 | Advanced Materials for Reversible SOFC Dual Mode Operation with Low Degradation | Randy Petri, Versa Power Systems      |
| 2:40 | Materials & Modules for Low-Cost, High Performance Fuel Cell Humidifiers        | Will Johnson, W. L. Gore & Associates |
| 3:00 | Break   |                                       |

**Portable Power**

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|------|--|----------------------|
| 3:30 | Novel Approach to Advanced DMFC Anode Catalysts                    | Tom Gennett, NREL    |
| 3:50 | Novel Materials for High Efficiency DMFCs                          | Chris Roger, Arkema  |
| 4:10 | New MEA Materials for Improved DMFC Performance, Durability & Cost | Philip Cox, PolyFuel |