



The Electrochemical Society – Detroit Section

Seminar Notice: Thursday, March 29th, 2007

Electrocatalyst/Support Systems for Automotive Polymer Electrolyte Fuel Cells: Activity and Durability Issues

Michael K. Carpenter, Lee L. Feng, Huber A. Gasteiger, Wenbin Gu, Rohit Makharia,
Frederic T. Wagner, Susan G. Yan and Paul T. Yu
General Motors (Warren, MI)

Automotive applications of fuel cells will require cathode catalyst activities that are four-fold higher than those of state-of-the-art conventional Pt/carbon catalysts. More than half of this high activity must be maintained throughout an automotive lifetime that includes (1) ~300,000 large potential swings and (2) ~30,000 start/stop cycles that tend to degrade the active metal catalyst particles and the conductive catalyst support medium, respectively. Discussion of the mechanisms of activity enhancement and of catalyst/support degradation will point out directions for research to achieve the necessary activity and durability improvements.

Dr. Michael Carpenter is a Staff Research Scientist with General Motors Fuel Cell Activities in Warren, MI. While at GM his work has involved a variety of topics including photoelectrochemistry, electrochromics, lead-acid batteries, and fuel cells. He received his PhD in Inorganic Chemistry from the University of Wisconsin-Madison in 1984.

Date: *Thursday, March 29th, 2007*

Location: Lawrence Technological University
21000 West Ten Mile Road
Southfield, MI 48075

Building # 8 (University Learning & Tech Building), 4th Floor, Room T410
Use Parking Lot A or H off of West Ten Mile Road

Time: 5:30 pm Reception / 6:30 pm Dinner / 7:30 pm Speaker

Price: \$20 Members / \$22 Guests / \$15 Students

Payment: Cash or Check

RSVP by: **Monday, March 26th, 2007 to Alvaro Masias**
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