



The Electrochemical Society – Detroit Section

Seminar Notice: Monday, June 9th, 2008

Electrocatalysis in the Direct Methanol Fuel Cell System: Synthesis and the Role of Nanocatalysts

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National Research Council of Canada

Ottawa, Ontario, Canada

The presentation will focus on the science surrounding the DMFC system, which is widely viewed as the appropriate fuel cell for mobile, portable electronic applications. Special emphasis will be given to the anode electrocatalyst and the role of nanoparticles in lowering the loading requirements, and therefore reducing overall system cost. A highly controlled, reproducible nanocatalyst synthesis method, developed at NRC, will be discussed. The analysis techniques employed to investigate and understand the surface and bulk properties of the anode nanocatalyst will be presented, with special attention paid to the caution needed when using XRay Diffraction [XRD] techniques to analyze very small particles [below ca. 5nm.]. Results for the Pt-Ru “alloy” catalyst system will be given, with an emphasis on exactly what we mean by an “alloy” with these very small particle sizes. The nature of the Pt-Ru nanocatalyst surface [where the reactions take place], as opposed to the bulk, will be discussed and experimental results of our investigations presented. As well, an overview of the ECS and its activities will be presented.

Date: *Monday, June 9th, 2008*

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

Building # 5 (Taubman Welcome Center), 4th Floor, Room 406
Use Parking Lot A, C or D (Lots C & D are accessed off NW Highway)

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

Price: \$20 Members / \$22 Guests / \$15 Students **Payment:** Cash or Check

Or, pay in advance online via credit card: <http://www.electrochem.org/ecs/sections/detr/detr.htm>

RSVP by: **Monday, June 2nd, 2008 to Chad Kotarba**
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