



**The Electrochemical Society – Detroit Section**  
*Seminar Notice: Wednesday, October 22<sup>nd</sup>, 2008*

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**New Generation of Lithium Batteries for Electric-based Transportation**

**Gholam-Abbas Nazri**

*General Motors Research and Development Center  
30500 Mound Road, Warren, Michigan 48090*

Lithium battery for transportation requires abundant, super low cost, high performing materials. The current lithium-ion battery is limited on performance and its cost/kWh is high for automotive applications. Therefore, new materials based on new chemistry are required to meet the conflicting requirements of battery for electric-based transportation. This presentation deals with the development of novel electrode materials, new electrolyte and separator, and new packaging concept for next generation of advanced lithium battery. The fundamental physics and chemistry of designing new materials for battery, and current status of these materials will be reviewed. New class of anode material based on engineering of carbon-silicon composite, and electrode based on conversion reactions of metal hydrides will be presented. Advantages and disadvantages of various cathode systems, and their suitability for transportation applications, limitation of current lithium-ion chemistry, and potential of new materials to replace the current technology will be reviewed.

**Date:** *Wednesday, October 22<sup>nd</sup>, 2008*

**Location:** Lawrence Technological University  
21000 West Ten Mile Road  
Southfield, MI 48075  
**Building #5 (Taubman Welcome Center), 4<sup>th</sup> 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

**RSVP by:** **Tuesday, October 13<sup>th</sup>, 2007 to Xia Wang**  
**wang@oakland.edu, (248)-370-2224**



