

Fall 2007 Wulff Lecture

Wednesday, October 17, 2007

4:30–5:30pm

Room 4-370

*Reception to follow in Pappalardo
Community Room, 4-349.*

Materials Challenges for a Sustainable Automotive Industry

Dr. Alan I. Taub

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Alan Taub oversees GM's science laboratories, located in the US, India, and Germany. These are focused on advanced powertrain systems, computer-based design and analysis systems for vehicle engineering, electronics and information-based vehicle systems, new materials and fabrication processes, new, more environmentally friendly fuels and lubricants, and more efficient emission control systems. He is responsible for GM's advanced technical work activity and GM's global technology collaboration network.

He has a bachelor's degree in materials engineering from Brown University and master's and Ph.D. degrees in applied physics from Harvard University. He has received 26 patents and has authored more than 60 papers and worked at GE and Ford prior to joining GM.

Fuel economy requirements, emissions regulations, concerns about global climate, and the push for energy independence are key factors impelling the auto industry to develop more sustainable vehicles. Achieving sustainability requires cutting-edge innovation in virtually every area of automotive technology, including advanced propulsion, lightweight and smart materials, electronics, controls and software, and telematics. As the industry works to integrate these new, more revolutionary technologies into the vehicle, it has become increasingly apparent that many of the major challenges to their implementation are materials related. This talk will highlight the most promising technology options and approaches and discuss the major materials issues in each area.

C O U R S E I I I **D M S E**