

# MATERIALS SCIENCE AND ENGINEERING

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*"Energy Crisis and Strategies for  
Inexpensive Photovoltaic Energy  
Conversion Technology"*

THURSDAY, OCTOBER 2, 2008  
4:00 P.M.  
1227 Hoover

## ABSTRACT

I will discuss the energy crisis in general, and show that the geological and economic fundamentals of an energy picture based on petroleum (and natural gas) have changed, probably forever. This change brings forth the need for cost-effective solar energy conversion technology to replace fossil fuels. In particular, photovoltaic energy conversion technology is becoming a very attractive option for electricity generation, and possibly for liquid fuel production. I will discuss the technological advances made, and needed, in inorganic PV energy conversion technology, with emphasis on the science and technology of thin film semiconductors for PV conversion.