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**Joint Materials &
Inorganic Seminar**

Thursday, Nov. 11th at 12:15 p.m.

**“Nanostructured Architectures
and ‘Artificial Leaf’ Solar Cells”**

To convert sunlight to electricity dye-sensitized solar cells (DSSCs) employ a strategy that is much like the first stages of photosynthesis, entailing light harvesting by strongly absorbing molecules, followed by fast electron transfer to a charge-transporting conduit. The best existing DSSCs convert solar energy to electrical energy with about 11% efficiency – or about a third of what is theoretically achievable with cells of this kind. This talk will focus on: a) understanding what limits the efficiency, and b) illustrating how nanostructured molecular-dye architectures and semiconductor-electrode architectures might be used to circumvent these limits.