

### **332e Nanostructured Photovoltaic Materials**

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The availability of economical and sustainable energy sources strongly influences our quality of life and, thus, global economics and politics. For this reason, new developments in materials and devices for converting solar radiation to electrical energy would impact everyone's lives. During the last 15 years, there has been a steady exploration of new ideas to make solar cells based on nanostructured materials; large interfacial areas in nanostructured materials present significant advantages for light absorption and charge separation, the two critical steps for solar-to-electric energy conversion. Specifically, dye-sensitized solar cells that make use of nanostructured wide band gap semiconductor films photosensitized with a metal-organic dye have emerged as a promising and potentially low-cost alternative to the traditional photovoltaic devices based on the p-n junction. In this talk, I will describe dye-sensitized solar cells based on ZnO nanowires and combinations of ZnO nanowires and nanoparticles.