



**Prof. Zhiqun Lin**

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*Semiconductor nanostructured materials: from synthesis,  
self-assembly to energy applications*

Functional polymers and nanocrystals are promising building blocks for advanced materials and devices. In this talk, I will present our efforts on nanostructured functional materials from synthesis, self-assembly to solar energy applications. Two studies will be discussed: **(1)** Semiconductor conjugated polymer-quantum dot (CP-QD) and conjugated polymer-quantum rod (CP-QR) nanocomposites via directly grafting CP onto QD and QR surface by Heck coupling and click reaction, and their potential applications in nanohybrid solar cells; and **(2)** Low-cost, high-efficiency dye-sensitized solar cells (DSSCs) through the use of nanostructured TiO<sub>2</sub> (e.g., nanotubes and nanoflowers) as photoanode, and earth abundant, environmentally friendly quaternary semiconductor copper zinc tin sulfide (CZTS) as counter electrode.

Host:  
Prof. Yongfeng Lu  
Department of  
Electrical Engineering

**Wednesday, November 14—4:00 pm  
Room 136 Jorgensen Hall**

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