

Faculty Candidate

Colloquium Announcement

**Polymer and Nanocomposite Materials with Applications to Optoelectronic
and Biophotonic Devices**

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Abstract

Since polymer and nanocomposite materials have the properties of low cost, simple device fabrication processes, and compatibility with flexible substrates, the interests in application of polymeric nanostructured thin films to optoelectronic and biophotonic devices have grown rapidly, especially in the last decade. In this seminar, some fundamental studies, including photorefractive effect, photovoltaic effect, electro-optic effect, laser emission, and two-photon absorption in polymer and nanocomposite materials will first be shown. Then, the applications of fundamental research results to nanophotonic and biophotonic devices will be presented. The optical tweezers technique to investigate a trapped single dielectric nanoparticle and biological cell will be presented as well. Preliminary results of fluorescence measurements in animal blood sera for possible early cancer diagnostics will also be shown.

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Thursday, March 1, 2007

12:30 p.m. – 1:50 p.m.

Campbell Hall 274

Refreshments served at 12:00 p.m. in CH 361

1300 University Boulevard

For further information, please contact the
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