

UNIVERSITY *of* DELAWARE  
BIOMEDICAL ENGINEERING  
SEMINAR

MARCH 28, 2016

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ASSISTANT PROFESSOR

BIOMEDICAL ENGINEERING

RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY

*“Rare-earth doped nanocomposites for targeted short-wave infrared imaging of cancer”*

**W**e are developing rare-earth doped nanocomposites as targeted contrast agents for clinical optical imaging of cancer. These materials undergo near infrared excitation and provide short-wave infrared emission, resulting in deeper imaging capability than visible or near infrared probes. Encapsulating rare-earth nanoparticles within an albumin shell and functionalizing with AMD3100 promotes targeting to CXCR4, a recognized marker for several highly

metastatic cancers. This presentation will describe our team’s multi-disciplinary research in rare-earth spectroscopy, nanoparticle synthesis and biofunctionalization, alongside development of systems for macroscopic (whole-animal) and microscopic (sub-cellular) imaging. Results will be reported from an ongoing study using these technologies to detect and track early micrometastatic lesions in breast cancer.

10:30am in 322 ISE Lab. Refreshments served at 10:15am.

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Dare to be first.