

Fall 2006 SEMINAR SERIES

F21C Bioprocessing & Biosensing Center

• DIVISION OF FOOD SYSTEMS & BIOENGINEERING •

PRESENTER:

Dr. Mark Haidekker

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University of Missouri - Columbia

TITLE:

Sensing Flow and Shear Stress with Molecular Rotors

ABSTRACT:

Molecular rotors, a special group of fluorescent molecules capable for forming twisted intramolecular charge transfer (TICT) complexes, are well explored as microscale, real-time viscosity sensors. More recently, a novel behavior was discovered in our lab where molecular rotors exhibit an increase of emission intensity in sheared fluids. The molecular rotors react instantly (without measurable delay) to changes of flow, and their sensitivity towards low fluid velocities is extraordinarily high. This behavior gives rise to novel sensors for flow and shear stress with high spatial resolution and for low-speed flow situations as they occur in microfluidic devices.

DATE • TIME • LOCATION:

Tuesday, November 28, 4:00pm
Ag Eng Bldg 105 • Refreshments