

Nature's color palette: bio-inspired approaches to stimuli-responsive materials

Beaupre 105

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3:00 – 4:00 p.m.

Room 105 Beaupre Center
for Chemical and Forensic
Sciences,
University of Rhode Island
Kingston, RI

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Abstract: We are developing sensors and dynamic materials that leverage the optical properties of natural systems to perform programmed responses to environmental variation. Inspired by biological coloration mechanisms ranging from camouflage to plant pollination, I will discuss our team's analytical approach to developing new measurement tools and color-changing formulations. These systems complete dose-dependent transformations upon activation by external stimuli including light and soluble analytes, enabling applications in areas such as personal health monitoring, art and architectural coatings, and agricultural security.