

“Rational Engineering of Colloids, Interfaces, and Assemblies for Stimulus-responsive Biosensors and Enhanced Therapeutic Efficacy”

**Wednesday
September 27, 2017
3:00 pm
Wu and Chen Auditorium
Levine Hall**



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Abstract

Early disease detection and diagnosis requires sensing of minute quantities of biomolecules in drawn fluids or image localized abnormalities in the body. Improvement upon existing technologies will require development of agents that can change their structure in response to the presence of an elevated biomarker with sufficient sensitivity, ignore the many other biomolecules present, and signal the positive result. This talk will address efforts in the Goodwin lab to develop such technologies based on colloidal interactions and assemblies.

Bio

Andrew Goodwin is an Assistant Professor in the Department of Chemical and Biological Engineering at the University of Colorado at Boulder. His research focuses on designing “smart” colloids and materials that can sense their surroundings and change their chemical and physical properties accordingly. His group also explores how interfaces organize themselves when interacting with chemical stimuli and also how they respond to external forces, with the aim of utilizing these studies for building next generation technologies in imaging, drug delivery, and catalysis. He received a BA in Chemistry from Columbia University and his Ph.D. in Chemistry from the University of California, Berkeley, where he was advised by Prof. Jean Fréchet. He has published >35 peer reviewed papers and has received an NIH New Innovator Award, an NIH Pathway to Independence Award, and a DOD Breast Cancer Postdoctoral Fellowship.

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