

# CHEMISTRY COLLOQUIUM



Guest Speaker:

**Professor Christy Haynes**

University of Minnesota  
Department of Chemistry

Wednesday,

April 19th, 12:00pm

Hutchison Hall Room 140

University of Rochester  
Department of Chemistry

## “Design and Redesign of Sustainable Engineered Nanomaterials”

### Abstract:

Engineered nanoparticles are increasingly being incorporated into devices and products across a variety of commercial sectors – this means that engineered nanoscale materials will either intentionally or unintentionally be released into the ecosystem. The long-term goal of the presented work is to understand the molecular design rules that control nanoparticle toxicity using aspects of materials science (nanoparticle design, fabrication, and modification), analytical chemistry (developing new assays to monitor nanotoxicity), and ecology (monitoring how nanoparticles enter and accumulate in the food web through bacteria and how these nanoparticles influence bacterial function). Taken together, these data suggest that careful consideration of engineered nanoparticle surface chemistry will likely allow design of safe and sustainable nanoscale materials.

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