

Department of Chemistry and Biomolecular Science  
Center for Advanced Materials Processing (CAMP)  
Clarkson Student Chapter of the Electrochemistry Society  
Clarkson University

## Seminar

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*will speak on:*

### ***'Room temperature sinterable silver nanoparticles for printable electronics'***

**Abstract:** Printed conductive structures derived from silver nanoparticles are increasingly used in both traditional electronic devices as well as novel applications such as displays, sensors, and solar cells. In all cases, and especially for thermally sensitive substrates, lowering the sintering temperature of Ag nanoparticles remains an important technology driver as it leads to equipment simplification, shorter fabrication times, and significant cost savings. For this reason, developing particles that can be consolidated into electrically conductive elements/structures at ambient temperatures has been for long the 'Holy Grail' of electronic industry. This lecture will present a novel method to prepare printable concentrated dispersions of uniform silver nanoparticles in absence of polymeric dispersing agents. The elimination of these widely used additives along with the unique surface properties and excellent dispersion of the resulting particles makes possible the formation of electrically conductive and transparent films at room temperature. The research strategy used in the development of the silver nanoparticles and dispersions as well as their properties and potential applications will be discussed in detail.

**Thursday, July 14, 2022,**

**11:00 AM**

**BH Snell Hall 213**