

Abstract Submitted  
for the MAR15 Meeting of  
The American Physical Society

**Toward Designer Nanoparticle Assemblies: Supramolecular Nanocomposites on Patterned Surfaces** KATHERINE EVANS, JOSEPH KAO, TING XU, Univ of California - Berkeley — Nanoparticles have unique properties due to the quantum confinement effect. Controlled assemblies of nanoparticles of different sizes and chemical composition are predicted to have new optoelectronic properties. Supramolecules are ideal structural framework to guide nanoparticle assemblies in thin films without modifying the particle ligand chemistry. We recently showed that optically patterned trench patterns can effectively guide the assembly of supramolecular nanocomposites over micrometer to form aligned nanoparticle lines. I will report our recent investigation on more complex patterns to evaluate how the curvature of the pattern affects the nanoparticle assembly. Preliminary studies show potential for controlling and tailoring nanoparticle assemblies, and in turn, the optical properties of such assemblies.

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Date submitted: 14 Nov 2014

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