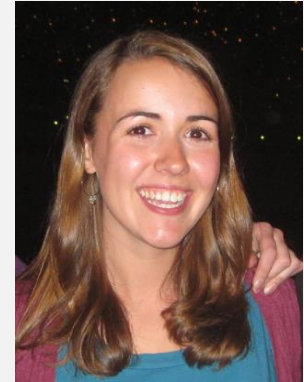


Moments in Materials Presentation: ***Artificial Atoms***



Speaker: Emma Dell

When: Thursday, June 6th 2013, 4:30 p.m.

Where: NWC, 7th floor meeting room, RM 703

Building precisely-ordered nanostructures is a major goal in materials chemistry. One means of achieving this is through programmable atom equivalents, or “artificial atoms”. DNA can bind together nanoparticles to create structures that are mimics of ionic lattices or covalent molecules. Furthermore, by tuning the size of the nanoparticle, and the length of the DNA, structures that have no known natural equivalent can be accessed. Being able to both design building blocks and then control their arrangement with sub-nanometer precision, has wide reaching applications including optics, electronics, and medical diagnostics.

Selected references

C. Zhang et al., (C. Mirkin), *Nature Materials*, 2013 ASAP

Y. Wang et al., (D. Pine), *Nature*, 2012, 491, pp 51

P. Alivisatos et al., (P. Schultz), *Nature*, 1996, 382, pp 609

