How Organic Semiconductors Work

Electronics made largely from carbon have found some applications such as in cell phone displays. To realize the full promise of such carbon, or “organic”, semiconductors, a good understanding of fundamental processes is needed. I will address questions such as “how does an organic semiconductor become doped?” and “what is the ultimate speed of organic devices?” in the context of field effect transistors and photovoltaic devices made from crystals of small molecules (rubrene, C60, HBC). I will discuss experiments that demonstrated, for the first time, controlled doping in organic semiconductors. I will also discuss the consequences of crystallinity for organic photovoltaics.

Art Ramirez
University of Santa Cruz

November 3, 2009 (Tuesday) at 3:30pm (Refreshments at 3:15pm)
SCI 107, Metcalf Science Center, Boston University
Call: Winna Somers (wsomers@bu.edu) (617) 353-9320
Host: Bennett Goldberg