

NANO HOUR

Wednesday, February 8, 2006

3:00 PM

Beckman Institute - Room 3269

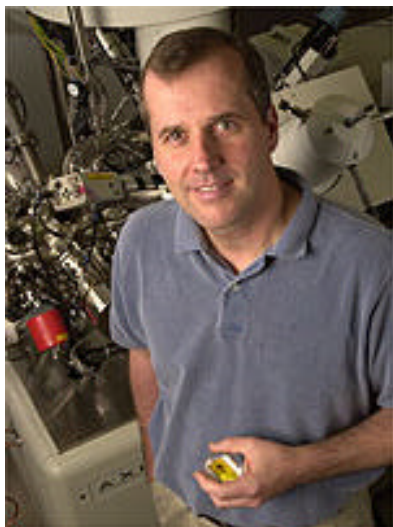
The Strange (and Important) Non-Bulk-Like Properties of Nanoscale Materials

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The understanding of mesoscopic behaviors in materials presents interesting challenges for both experiment and theory. One body of research conducted by my students over the past few years has been concerned with eliciting novel structural and dynamical behaviors in materials by imposing finite constraints on size--work that has considered the nature of elasticity at molecular length scales and atomic relaxations in nanocrystalline solids as specific examples. In this talk I will discuss recent experiments that have led us to pose the following question: "Can a metallic cluster have a negative coefficient of thermal expansion?" The surprising answer in one case appears to hold very important implications for catalytic processes mediated by supported metal clusters.



Coffee and cookies will be served.