How Small is Small?
A Comparison of Methods for Determining the Size of Nanoparticles

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The synthesis of nanoparticles promises to lead to significant new advances in fields as diverse as electronics and medicine. But since it is the size of the particles that gives them their special properties, it is crucial to be able to measure how big they are. The diameter of nanoparticles intended for medical applications, for example, might determine the difference between a successful cure and a harmful procedure. The two most commonly used techniques for nanoscale size determination are electron microscopy and X-ray diffraction, but both have drawbacks. In this talk, the accuracy and ease of use of these methods are compared to a relatively new technique for measuring nanoparticle size: extended x-ray absorption fine structure (EXAFS) analysis.

Friday, September 9th 2005, McCook Auditorium, 3:00 pm, Refreshments 2:45 pm