The Science of Nanotubes
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Nanotubes formed from carbon or boron nitride have highly unusual electronic and mechanical properties. Depending on composition and geometry, they range from excellent metals to wide-bandgap semiconductors. They can be grown with length-to-diameter aspect ratios exceeding 10 million, and are axially exceptionally stiff yet form nearly ideal frictionless bearings. This talk will address the exciting basic science as well as applications of nanotubes and nanotube-based nanoelectromechanical systems.