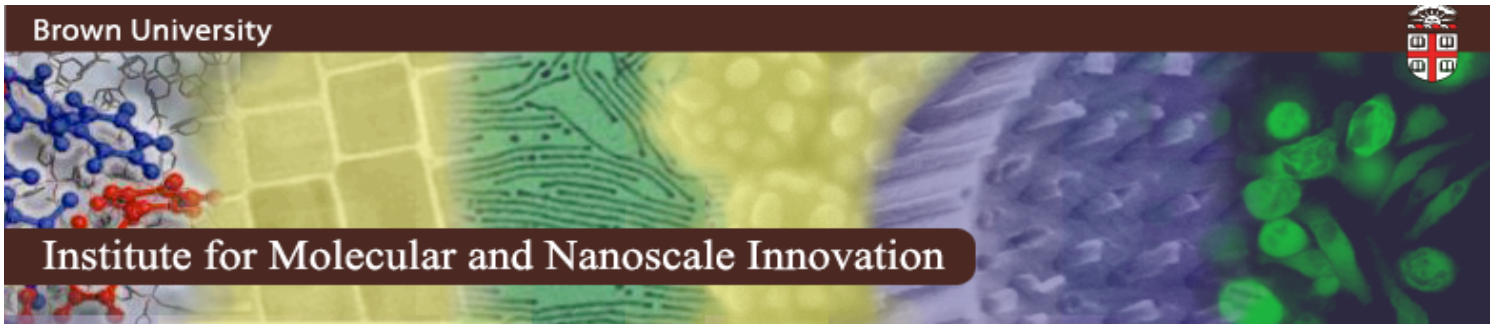

"Engineering of Carbon Nanotube Architectures"

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ABSTRACT

Carbon nanotube has an important place in nanotechnology. From nanoelectronics to high strength composites, these structures have shown promise and there is a large effort world-wide in research and development of these materials. Several start ups and newly initiated activities at large companies on nanotubes bear testimony to the importance of this material in the technologies to come. This talk will give a perspective on the field of nanotubes, where we are today and what are the real promises and challenges. The focus in our laboratory over the last decade has been on the engineering of these materials through directed assembly and different approaches in synthesis and processing. The talk will present concepts that lead to the engineering of individual nanostructures as well as assembled architectures that might be used in applications, such as nanoelectronics and sensors, membranes, composites, thermal management and energy related products will be briefly discussed in the talk. The overall scope for this material in the near term emerging technologies will be considered.

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