



The Hebrew University Center
for Nanoscience & Nanotechnology



Nano Seminar

Silicon Nanotubes As A Diverse Platform For Therapeutic And Energy-Relevant Applications

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Abstract:

Silicon Nanotubes (SiNTs) are a relatively well-defined form of nanostructured silicon with properties of potential value, including tunable inner and outer diameter, diverse surface functionalization opportunities, along with novel porous sidewall morphologies capable of nanoscale infiltration, release, and in selected targeted cases, dissolution. Any practical applications require the development of practical routes to exploiting the tubular interior (as a nanoscale reaction vessel) as well as functionalization of the outer nanotube surface. In this presentation, recent results from our group concerning these nanotube platforms with regard to their possible therapeutic utility are described, as well as their possible relevance in the field of photovoltaic/optoelectronic materials. For the former topic, strategies for the uniform surface attachment of selected useful therapeutic molecules & nanoparticles, along with the associated properties of these functionalized nanotubes, are described. For the latter, the ability of a given nanotube (acting as a template) to influence the structure and properties of encapsulated novel organometal halide perovskite phases is demonstrated. Opportunities for future investigations will also be highlighted.

Gathering & Refreshments at 10:50

Please contact Alexandra Bannykh at 6584919 if you are interested in meeting the lecturer.

Tuesday, Oct 24th 2017, 11:00 at the Seminar Hall
Los Angeles Building, entrance floor.