

Complex Liquids/Nanostructure/Macromolecules
Technion-Israel Institute of Technology

Dr. Raphaël Lévy

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Will talk on

"On gold nanoparticles in biology: hype, hopes and controversies"

In the past 20 years, the number of articles about inorganic nanoparticles for biological research and medicine (as well as their potential risks) has literally exploded. Yet most of these have remained at the stage of concepts or proofs of principle without making much real impact. Using examples across the scales (Figure 1), from engineering of nanoparticle surfaces, to imaging/sensing inside cells, and finally, up to tracking of cells in preclinical models, I will discuss the properties, advantages and limitations of nanoparticles, trying to decipher the real prospects from the hype. I will also argue for a shift in how we are doing science, with an emphasis on openness, data sharing, publication of negative data, and more robust discussion of each other's work using the modern tools offered by the Internet and social media. My visit is funded by a British Council Lectureship, which aims at developing collaborations between Israel and the UK. I will briefly mention European and UK schemes that support joint research or post-doctoral fellowships to the UK.

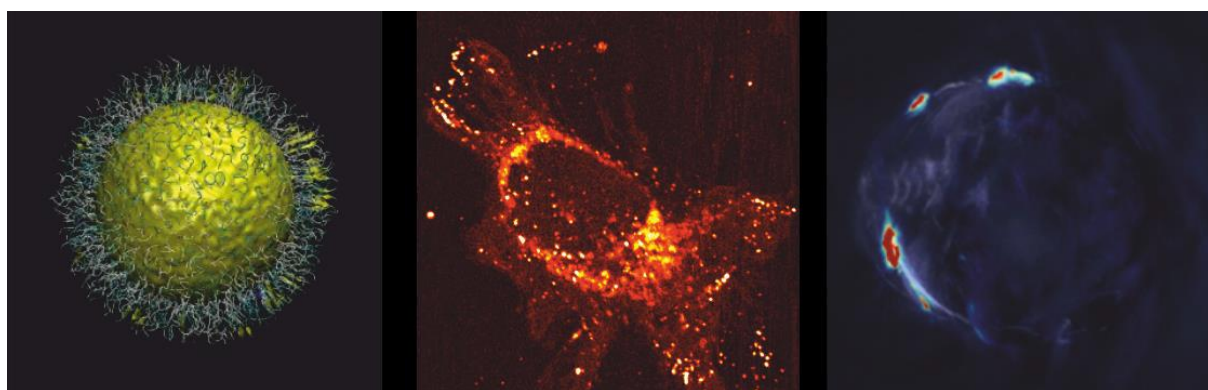


Figure 1 From left to right; Peptide-capped gold nanoparticle molecular dynamics simulation (Elena Colangelo), photothermal imaging of nanoparticles in live cells (Marie Held, Dave Mason and Charlotte Dawson) and photoacoustic imaging of gold nanorod labelled cells in live mice (Joan Comenge and Jack Sharkey)

Tuesday 03.11.15
11:30, Room 108, Chemical Engineering Building