

Nano-Structured Organic and Hybrid Materials for Emerging Applications

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Novel, functional hybrid materials with defined structures and functions are highly sought after in order to bring about significant technological innovations and to provide solutions to the problems associated with energy, healthcare and environment. Nanomaterials are particularly appealing because of their unprecedented properties due to their nanoscale dimensions and offer many advantages over the bulk materials.

Accordingly in this talk, I will present our efforts in the area of nanostructured materials and demonstrate their exploitation for the emerging applications. The talk will cover our recent works on the design and synthesis of intrinsically fluorescent oligomer and polymer based nanomaterials and their applications in the areas of nanomedicine and photonics as well as our ongoing works on the hybrid organic/inorganic nanoparticles, supramolecularly engineered-conjugated porous nanostructures, luminescent glycosylated drug and vaccine delivery systems.