

## **Stimuli-Responsive Nanostructured Materials: Design and Applications**

Sergiy Minko,  
Department of Chemistry and Biomolecular Science  
Clarkson University, NY

### **Abstract**

Response to external stimuli is one of the major processes by which living systems interact with their environment. Advances in nanotechnology provide a plethora of tools for designing "smart" responsive materials that mimic processes found in living systems. These artificial biomimetic nanostructures are engineered to assemble dynamically into reconfigurable materials suitable for a variety of applications in medicine, biotechnology, coatings, cosmetics and personal care, and miniaturized devices. The talk will overview recent results from our laboratory on the design, synthesis, characterization, and applications of nanostructured polymeric and colloidal systems used for the fabrication of smart responsive surfaces, membranes, micro/nano-actuators, colloidal particles, fibers, and capsules.