Institut Européen de Chimie et Biologie

I E C B

Bioengineered responsive nanosystems for biomedical devices.

Ashutosh TIWARI
Biosensors and Bioelectronics Centre, IFM-Linköping University, SWEDEN

The development of bioengineered smart nanomaterials in environment survivability is the recent arena of nanoscience and nanotechnology. It is a newly emerging supra-disciplinary field with growing commercial potentials. Stimuli-responsive nanosystems answer by a consider-able change in their properties to small changes in their environment viz. *i*) physical-temperature, electric or magnetic fields, and mechanical stress; and *ii*) chemical effectors- pH, ionic factors, chemical agents, biological agents. Such responsive biosystems are attractive increasingly more prevalent as scientists learn about the chemistry and triggers that induce conformational changes in structures and devise ways to take advantage of and control them. New smart bioengineered nanosystems are being formulated that sense specific environmental changes and adjust in a predictable manner, making them useful bio-tools. The progress in this field would make significant contributions to advanced medical technology, bioelectronics, nanomaterials and nanotechnology. The aim of talk is to discuss various strategy of cutting-edge bioengineered nanosystems for biomedical devices.