LiF-MO (M=Co, Fe, Ni) Nanocomposite Thin Film as Anode Materials for Lithium-Ion Battery

To investigate the electrochemical performance of MO (M=Co, Fe, Ni) nanostructures on lithium insertion and extraction, size-controlled LiF-MO nanocomposite thin-film electrodes, consisting of metallic M and M oxide (MO) nanoparticles in an amorphous, inert LiF matrix, were designed and fabricated using a RF sputtering system with metallic M and LiF mixture targets. 

Combined In vitro Effects of TiO2 Nanoparticles and Dimethyl Sulfoxide (DMSO) on HepG2 Hepatocytes

Introduction: Professional workers that manufacture or use titanium dioxide (TiO2)-based paints are exposed to potentially toxic TiO2 nanomaterials as well as to different paint solvents such as dimethyl sulfoxide (DMSO). In this context, we evaluate the combined cytotoxic effects of TiO2 nanoparticles and DMSO on HepG2 human hepatocytes.
**Impetus in Fabrication of Biosensors**

Published On: March 21, 2015 | Pages: 001 - 001

Author(s): Jagriti Narang*, Nidhi Chauhan and Nitesh Malhotra

A biosensor is an element employed for the detection of an analyte by combining a biological component with a physico-chemical detector component. ...

**Graphene Solar Cells-Will it be the Ultimate Power Converter?**

Published On: June 16, 2015 | Pages: 019 - 021

Author(s): Arghya Narayan Banerjee*

Solar cells or photovoltaic (PV) cells involve the direct conversion of light energy into electrical energy. PV cells are basically p-n junctions made from layers of semiconducting materials. ...

**Self-Assembly as a Technique for Peptide-Based Materials**

Published On: May 06, 2015 | Pages: 011 - 013

Author(s): Juan Wang and Xuehai Yan*

Molecular self-assembly is a key function in biology and has been developed as an elegant technique for fabrication of various complex structures and functional materials. Key importance for structural formation in terms of self-assembly is molecular recognition pertaining to intermolecular weak interactions such as hydrophobic interactions, hydrogen bonds, p-p stacki ...