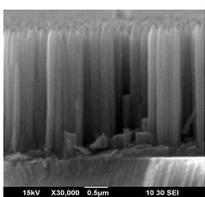
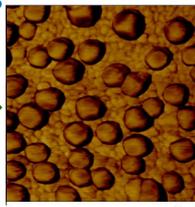


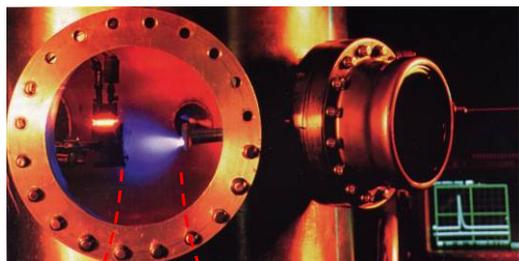
## Thin Films and nanostructures for sensors



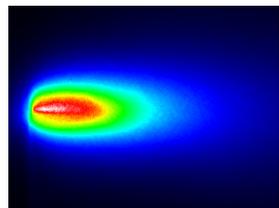
ZnO nano-rods



TiC nano-structure

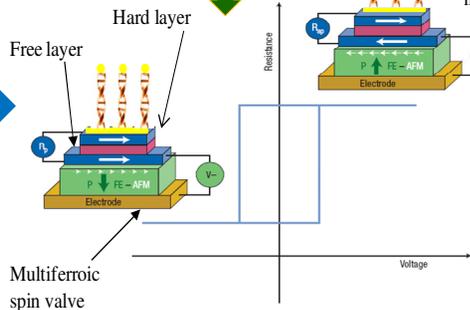


Laser ablation for film growth



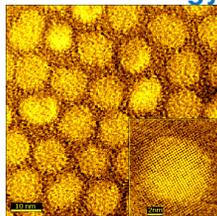
Plasma dynamics by CCD imaging

## Magnetoelectric spin-valve sensor for bio-detection

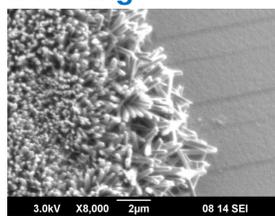


Multiferroic spin valve

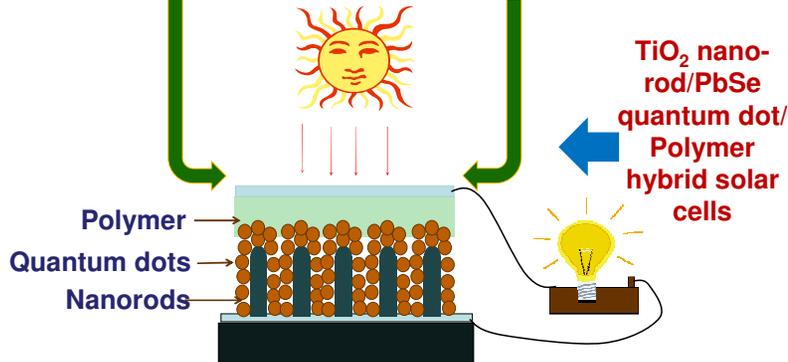
## Quantum Dots and nano-rods for energy harvesting



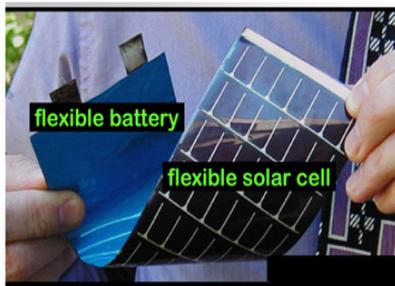
PbSe quantum dots



TiO<sub>2</sub> nano-rods

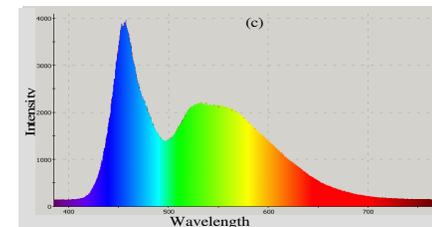
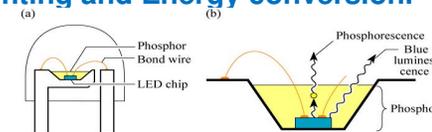


TiO<sub>2</sub> nano-rod/PbSe quantum dot/Polymer hybrid solar cells



Flexible power generation and storage device

## Nanoparticle coatings for Solid State Lighting and Energy conversion.



(a) A single-chip LED, (b) LED with phosphor to generate broadband radiation, (c) Emission from LED pumped phosphor to form white light.



Microwave plasma deposition of nanoparticle coatings

Hybrid solar film + Solid State Light = Smart Window

