

DIRECTION DES SCIENCES DE LA MATIERE,
INSTITUT RAYONNEMENT MATIÈRE DE SACLAY

SERVICE DE PHYSIQUE ET DE CHIMIE DES SURFACES ET DES INTERFACES

SEMINAIRE *

Vendredi 20 juin 2008 à 11h00

Bâtiment 466, salle 111 - CEA Saclay, 91191, Gif sur Yvette
**Preparation and Physical Property Studies of Oxide Based
Nanostructures**

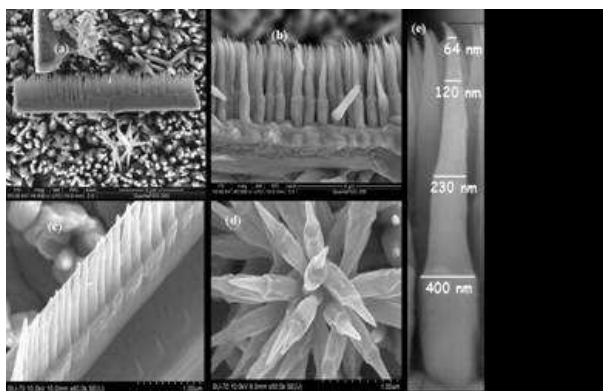
Prof. Rao

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Invité par Patrick Soukiassian

Résumé :

The functionality of nanoscale electronic devices are controlled by novel engineered nanomaterials. ZnO is a unique material that offers about a dozen different application possibilities. ZnO lattice is amenable to metal ion doping (3d and 4f) and the physics of doping in ZnO is very interesting. Doping a small amount of transition metal ion changes the morphology as well as optical properties of the parent ZnO compound. My talk presents results on the bulk, thin film and nanostructured growth of ZnO by diverse growth techniques such as pulsed laser deposition, chemical synthesis and vapour deposition with a view to study optical and electrical properties of undoped and doped ZnO. One-dimensional ZnO nanostructures offer great scope for fundamental studies such the determination of the role of dimensionality in tuning the physical properties. Variations in growth parameters lead to interesting formation of nanostructures of ZnO (see figure below). Results on ZnO encapsulated Fe_3O_4 nanoparticles have shown promising trends suitable for various applications.



* SERA PRECEDE D'UNE PAUSE-CAFE A PARTIR DE 10H30

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