

Nanostructured Semiconductor Films

Nanostructured TiO₂ Films

We employ colloidal route to prepare nanostructured TiO₂ films. The method is useful for casting mesoscopic TiO₂ films on conducting glass electrodes and can be employed in constructing photochemical solar cells.

(Acknowledgment: Thanks to NREL scientists for providing us this recipe)

Nanostructured SnO₂ Films

See our original reference

Bedja, I., Hotchandani, S. and Kamat, P. V., Preparation and characterization of thin SnO₂ nanocrystalline semiconductor films and their sensitization with bis(2,2'-bipyridine)(2,2'-bipyridine-4-4'-dicarboxylic acid)ruthenium complex. *J. Phys. Chem.*, 1994, 98, 4133-4140.

Nanostructured ZnO Films

See our original reference

Hotchandani, S. and Kamat, P. V., Photoelectrochemistry of semiconductor ZnO particulate films. *J. Electrochem. Soc.*, 1992, 139, 1630-4.

Modification of oxide films with CdS

See our original reference

Hotchandani, S. and Kamat, P. V., Modification of electrode surface with semiconductor colloids and its sensitization with chlorophyll a. *Chem. Phys. Lett.*, 1992, 191, 320-6.

Hotchandani, S. and Kamat, P. V., Charge-transfer processes in coupled semiconductor systems. *Photochemistry and photoelectrochemistry of the colloidal CdS-ZnO system. J. Phys. Chem.*, 1992, 96, 6834-9.