INSTITUTE OF PHYSICS BHUBANESWAR

POST DOCTORAL POSITIONS
IN
EXPERIMENTAL CONDENSED MATTER PHYSICS

I. We have a strong program on thin film growth and modification by energetic ion beams and their characterization. In addition, we have a low energy ion beam induced surface nanostructuring unit for synthesis of large area patterned substrates. These patterned substrates can be used as templates for deposition of magnetic, ferroelectric, and optical thin films. Thin film growth for different applications would be possible by using UHV e-beam evaporation, DC/RF magnetron sputtering (with GLAD attachment), and pulsed laser deposition facilities. Presently, we have two postdoctoral fellow positions open for working on problems which will make use of the above facilities. One position is meant for working with materials research based on thin film growth for solar cells / TFTs. The other position is meant for growth of thin films on patterned substrates for magnetic/optical studies. The candidates should have preferably a Ph.D. degree in experimental Condensed Matter Physics/Materials Science. Candidates with experience in thin film/nanostructures and/or use of ion beams may be preferred.

II. A postdoctoral fellow position is also open in the field of electronic structure / band structure calculations using various computational methods. The fellow in this position needs to work in collaboration with the experimental group working on the electronic structure / band structure studies. Previous experiences in working with strongly correlated systems are desirable.

III. A postdoctoral fellow position is available for working in the area of "Modification of Surfaces by Ion Beams". Candidate should have a Ph.D. Degree in experimental Condensed Matter Physics or Materials Science or theoretical Condensed Matter Physics. Experience in some of the techniques related to surface-interface Physics, accelerator physics, and related theoretical simulations, AFM/STM, XPS, photoemission, ion scattering techniques, thin film growth, and growth of nanomaterials will be required.

IV. A postdoctoral fellow position is available for working in the areas of "Interaction between Surfaces and Biomaterials". Candidate should have a Ph.D. degree in experimental Condensed Matter Physics / Materials Science / Chemical Engineering / Chemistry / Biology. Experience in some of the techniques related to growth of nanomaterials, handling of biomaterials (like DNA, Protein, cells etc.), interaction between biomaterials and nanoparticles or surfaces will be required.

V. One of our research interests has been the synthesis of nanoclusters in semiconductors through ion-implantation. We have been using TEM, Raman scattering, high resolution XRD for sample characterization, A laboratory for optical characterization with low temperature steady state and time-resolved fluorescence measurements is shortly going to be set up. The candidate is expected to join this activity and it is desiarable that he/she should have the necessary working experience in ion beam research. Familiarity with electron microscopy Raman scattering, photoluminescence and XRD will be highly useful.

IOP PDF positions are initially for the duration of one year and is extendable for another year. Candidates who have submitted their Ph.D. thesis may also apply for the position. The amount of fellowship will be Rs. 21,000-24,000/- per month (depending on the experience of the candidate) apart from HRA and other admissible allowances.

Candidates must mention the position number and area of research for which she/he is applying.

Candidates may send their application with CV and List of Publications to:

Dr. T. Som
Institute of Physics
Sachivalaya Marg
Bhubaneswar-751005
E-mail: tsom@iopb.res.in
Tel: +91 - 674 - 2306416
Fax: +91 - 674 - 2300142

Candidates must arrange two letters of reference, which should be sent by the referees directly to the above e-mail or postal address.

The last date for sending completed applications is January 31, 2011.