
INDIAN INSTITUTE OF TECHNOLOGY MANDI, H.P., INDIA

Advertisement for various posts in different sponsored projects

Date: 23th October, 2016

Applications are invited for **various positions** in different sponsored projects (funded by MHRD, DST, SCL, Mohali (ISRO) etc). The details are as follows:

Title of various research projects:

1. Novel Non Chemically Amplified Molecular Photoresists for Nanoelectronics at the 20 nm Node or Beyond (funded by SERB, DST)
2. Development of Indigenous DUV Photoresists for 180nm Process Technology at Semiconductor Laboratory (SCL), Mohali : Make in India (funded by ISRO, SCL Mohali)
3. Development of Indigenous Photoresists Technology for Semiconductor Industries: Impact on Indian Economy, Skilled Manpower Development and Employment Possibility (Funded by MHRD and SCL, Mohali (ISRO))

These are high profile dynamic projects for the development of organic and hybrid organic-inorganic resist materials (both molecular and polymeric) for semiconductor chip fabrication by nanolithography. The research fellows (scientists and engineers) will conduct research at IIT Mandi. Travel to Taiwan/other countries may be required for various experiments at their facilities. Travel is required to various facilities in India for conducting various different requirements for the projects in addition to overseas. **The promising personnel may get opportunity to be a part of upcoming start-up company 'K&T Hitech Materials.**

Openings for the following posts:

1. **Senior project scientist/chemical engineer/polymer engineer** (Salary: Rs. 25000-70000/month, depending on experience, performance etc)
2. **Project scientist/chemical engineer/polymer engineer** ((Salary: Rs. 15000-50000/month, depending on experience, performance etc).

3. **Project associate/ Junior research fellow (JRF)** (Salary: Rs. 12000-30000/month, depending on experience, performance etc).
4. **Project assistant** (Salary: Rs. 7000-16000/month, depending on experience, performance etc).

Expertise we are looking for:

1. Innovative synthetic chemist/chemical engineer/synthetic polymer chemist with capability to scale up in multigrams/kilograms. Optimization for batch reactions. Strong instrumentation background in characterization of monomers and polymers is essential. Synthetic chemist should have elaborate knowledge of NMR and IR spectroscopy and be able to trouble shoot and take a leading role commensurate with position.
2. Chemical engineer with experience in establishing scale up facilities for monomer and polymer synthesis- batch or continuous reactors with on-line monitoring of process parameters and reaction conversion; knowledge of rheology/ thin film processing and characterization; hands on experience in reactor design, fabrication; and developing instrumentation for same. S/he should be able to establish a state of the art polymer characterization facility at IIT Mandi with emphasis on rheology. It is desirable that the selected candidate should be able to work independently and lead a group effort and report to the PIs meeting milestones and deliverables for the projects in a timely manner.
2. Person with knowledge of lithography particularly resists formulation, thin film optimization, developing condition optimization, pre/post-bake temperature optimization, patterning using electron beam lithography, and pattern transfer using etching technique.
3. Analytical/inorganic/physical/materials/chemical engineering background fellow with strong experimental and characterization experience. Prior experience in clean room facility will be a plus.
4. Capability of writing patent, manuscript etc will be a plus.

All the positions mentioned above require the ability to work collaboratively in a dynamic group.

The Co-coordinators have the discretion to decide upon the number of candidates to be selected in each post or not to select anyone for a particular post, to restrict the number of candidates to be called for interview to a reasonable limit on the basis of qualifications and experience higher than the minimum prescribed in the announcement.

Investigators: Dr. Subrata Ghosh (PI)
Dr. Pradeep Parameswaren (Co-PI)
Dr. Satinder Sharma (Co-PI)
Associate Professor, IIT Mandi
Prof. Kenneth E. Gonsalves (Consultant)
Visiting Distinguished Professor, IIT Mandi

Duration: 12-36 Months

Minimum Qualification:

For senior project scientist/engineer: PhD (in sciences/engineering) or MTech with 5 years experience in relevant areas

For project scientist/engineer: MTech or MSc with 2 years experience after MSc or Btech with two years experience after BTech in relevant areas

For project associate/JRF: MSc or BTech or M. Tech. in relevant areas with 55% (or 50% for SC/ST candidates) marks in chemistry/polymer chemistry (candidates with NET(JRF)/GATE qualification will be given preference)

For project assistant: BSc or 3 years engineering diploma in relevant areas.

Age Limit: As per the Institute rule.

Age relaxation: upper age limit is relaxable upto 5 years for SC/ST/OBC/Women/Physically challenged candidates

JRF may get PhD admission if fulfills admission criteria of IIT Mandi.

How to apply: Interested and eligible candidates may apply by submitting electronic copy of the filled-in application form as per the following format (in DOC or PDF file) to photoresistIITM@gmail.com and copy to kenneth@iitmandi.ac.in, subrata@iitmandi.ac.in, pradeep@iitmandi.ac.in, satinder@iitmandi.ac.in

The shortlisted candidates may have to arrange three letters of reference.

Those who have qualified NET/GATE exams should clearly mention details about NET/GATE qualification (Year, rank etc.), in the application form.

For further information, contact: subrata@iitmandi.ac.in, 09459527580

Deadline for Application: 17-10-2016 (on or before 5 pm)

Application format

- 1. Name of the post applied for**
- 2. Candidates name**
- 3. Mother's/Father's /Husband's name**
- 4. Date of birth**
- 5. Nationality**
- 6. Academic qualification details**
- 7. Experience details**
- 8. Details of research publication(s) (if any)**
- 9. Additional remarks, if any (for example, any special skill, expertise etc.)**