



Module PMRF-ISSS005

Material and Electrical Characterization Techniques

Name of the PMRF student

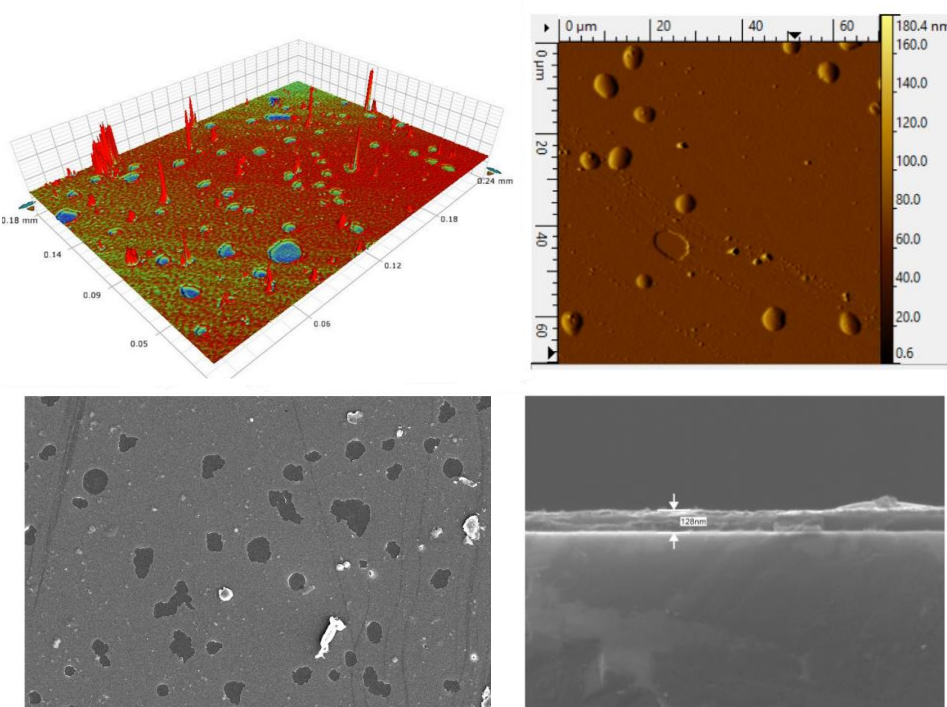
Harsh Raj

Required background of the students taught

Final Year UG and PG students in Electrical and Electronics Engineering, Nanoscience and Nanotechnology, Material Science, Metallurgical Engineering, Physics, and other disciplines

Online session coordinator

Will be chosen from the list of registrants



Details of the content of the module

This will be an introductory course to the various commonly used characterisation techniques. Roughly one or two lectures will be dedicated for each of the following methods

1. Atomic Force Microscopy (AFM)
2. Scanning Electron Microscopy (SEM)
3. X-ray Photoelectron Spectroscopy (XPS)
4. Raman and Photoluminescence (PL) Spectroscopy
5. Optical Profilometer
6. Ellipsometer
7. X-ray Diffraction (XRD)
8. Four-Point Probe Meter
9. Hall-effect Measurements
10. I-V and C-V Characteristics
11. Summary and Brief Overview of Other Advanced Electrical Characterisation Methods (RF measurements, DLTS, Thermoreflectance etc.)

Schedule of the module

Start Date – 7th May 2022

Lecture Schedule – Recorded lectures will be uploaded every Saturday; 13 – 15 lectures

End Date – Tentatively by end of July '22; may extend by one or two weeks

Meeting link : Will be shared later

[Link](#)

Contact email ID: issf.forum@gmail.com

Registration link:

<https://forms.gle/Xp9LYzXFuZckp2578>