Solid State Material Characterization Laboratory

Programme: M. Sc. (Physics)	Year: 2nd	Semester: 4th
Course: Program Core	Credits: 4	Hours: 9 per week

List of experiments:

1. Understanding the principle of X-Ray diffractometer and study of the structure of a powder sample
2. Understanding of the principle of absorption and luminescence.
3. Determination of optical band gap of a given material using absorption and the emission spectra.
4. Measurement of charge carrier mobility and conductivity of a given material in dark and under illumination.
5. Measurement of dielectric constant and loss in a material.
6. Understanding the principle of electron diffraction and microscopy.
7. Study of a solar cells (J-V characteristics under illumination, IPCE Spectra, calculation of short circuit current from IPCE Spectra)
8. Understanding the principle of cyclic voltammetry.