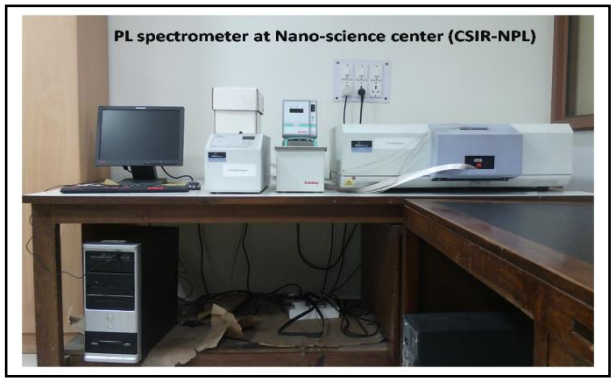
Measurement of: Photoluminescence spectrometer

Equipment: LS 55 Photoluminescence spectrometer (M/s Perkin Elmer)

- Source: Xenon discharge lamp, equivalent to 20 kW for 8 μs duration. Pulse width at half height < 10 μs.
- Reference detector: Photodiode for operation up to around 900 nm.

Property Measured: Photoluminescence emission and excitations of luminescent materials

Photograph (small size)



Basic Principle:

Photoluminescence (PL) is the spontaneous emission of light from a material under optical excitation. The excitation energy and intensity are chosen to probe different regions and excitation concentrations in the sample. PL spectroscopy is a contact less, non-destructive method of probing the electronic structure of materials.

.

Capabilities: Photoluminescence spectrometer has following salient features:

- Excitation 200-800 nm with zero order selectable.
- Emission 200-650 nm with standard photomultiplier with zero order selectable, 200-900 nm with optional R928 photomultiplier.

Sample Requirement: Thin films, powders and liquid sample.