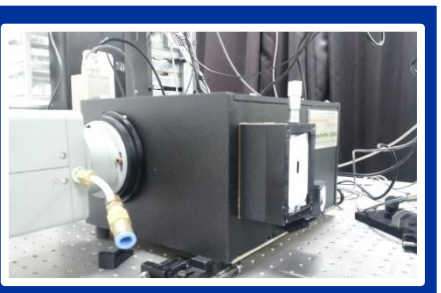
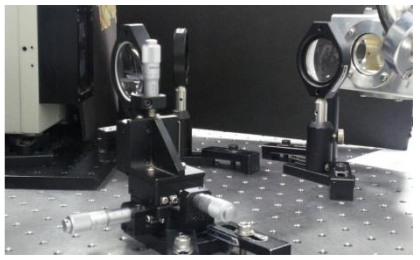
Photoluminescence (PL) System

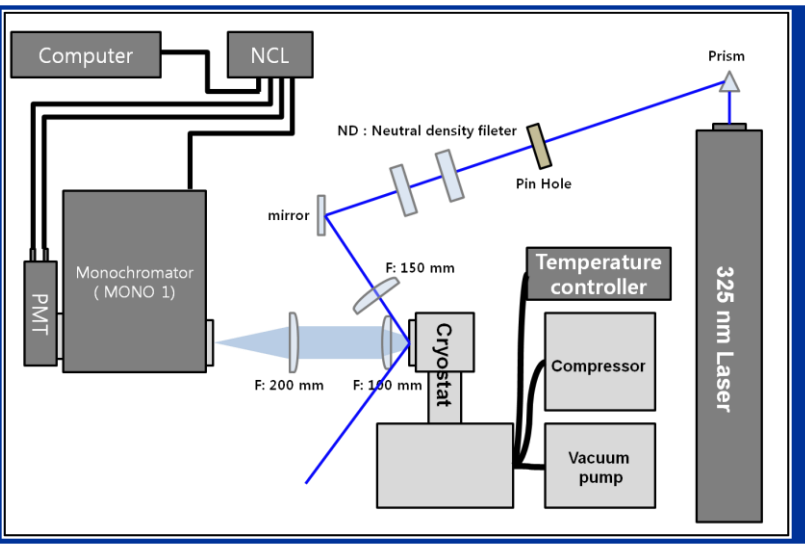
PL Equipment





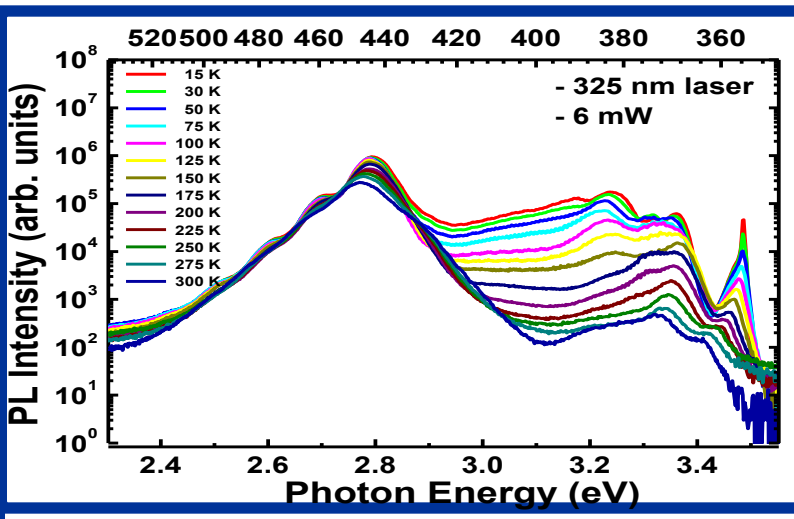
Laser & Optics | Mono. & Equip.

PL Schematic

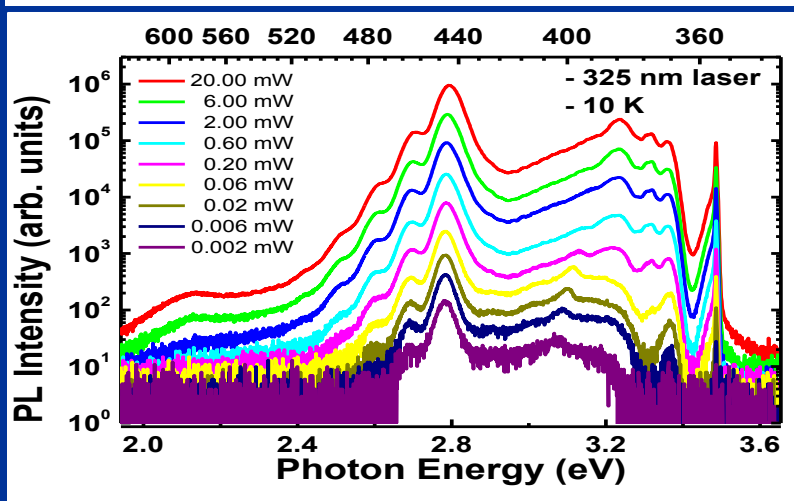


- Photoluminescence (PL) spectroscopy is a contactless, nondestructive method of probing the electronic structure of materials. Specifically, light is directed onto a sample, where it is absorbed and imparts excess energy into the material in a process called "photo-excitation."
- One way this excess energy can be dissipated by the sample is through the emission of light, or luminescence.
- In the case of photo-excitation, this luminescence is called photoluminescence. The intensity and spectral content of this PL is a direct measure of various important material properties.

PL Spectra

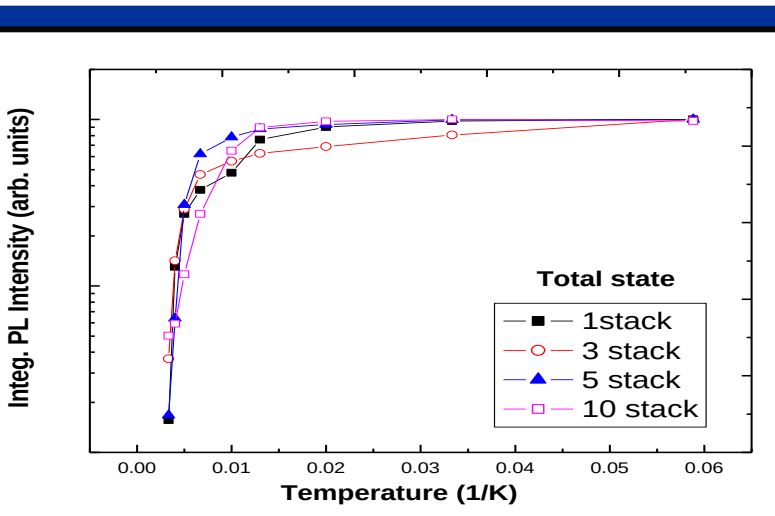


- Temperature dependent PL



- Excitation power dependent PL

Arrhenius Plot



- Temperature-dependent PL Arrhenius plot for PL efficiency with an increase temperature