Name: Liao Chen

Project Title:
- Optical Characterization of Dielectric Films

Project Abstract:
- Improvement in thin film technology in 20th century has brought a great number of technological breakthroughs in many areas. As to apply this material to our life properly, it is important to characterize them and know their properties better. This project will involve developing techniques for characterization of the optical properties of dielectric thin films. We will use diffraction-grating spectrometer to collect reflectance data at various positions on a substrate; After gathering data, we will set up appropriate modeling to estimate the index of refraction and physical thickness, as well as obtain graphs for reflectivity with wavelength.

Project Deliverables:
- Improve understanding in the optical properties of dielectric material.
- Find efficient method to evaluate optical indexes of material.
- Apply data analysis skills into material science area.