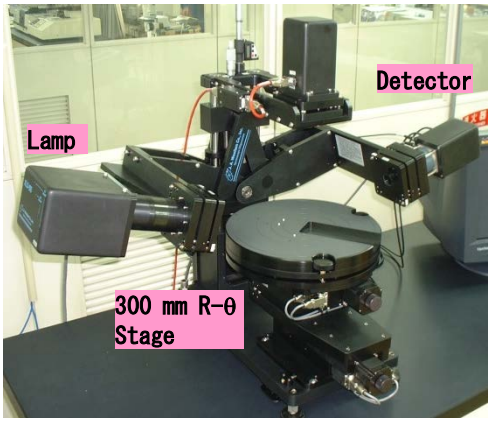
Evaluation of optical properties using spectroscopic ellipsometry

1. Features

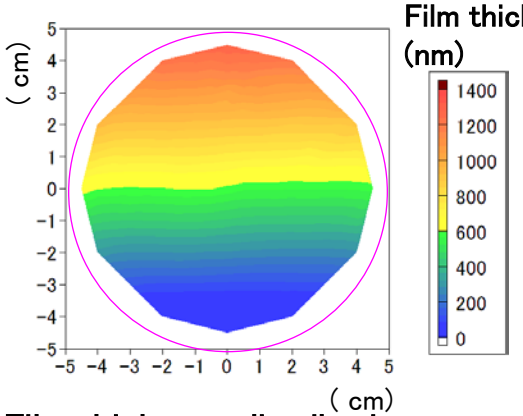


Spectroscopic ellipsometry (SE) provides dielectric constants (refractive index) and film thicknesses.

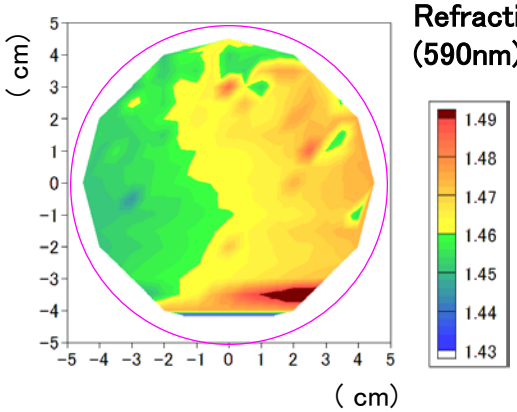
Features of our facility:

- Wavelength regions (193 nm to 1700 nm)
- Minimum beam diameter 500 μmϕ
  Usually, about 2 to 3 mmϕ
- Equipped with the 300mm wafer stage
- Depth profile and anisotropy analysis

2. Mapping measurement example of SiO_2 film on Si wafer



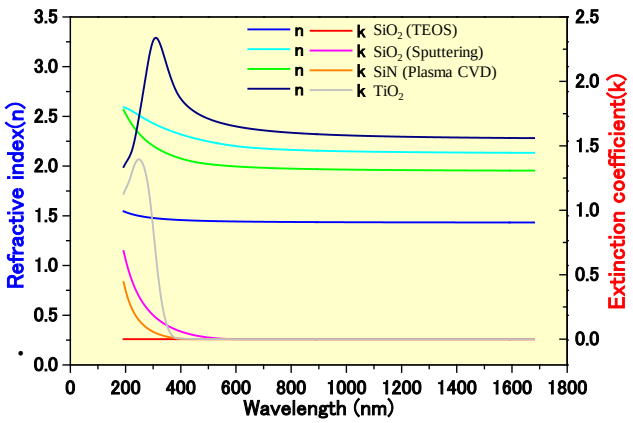
Film thickness distribution

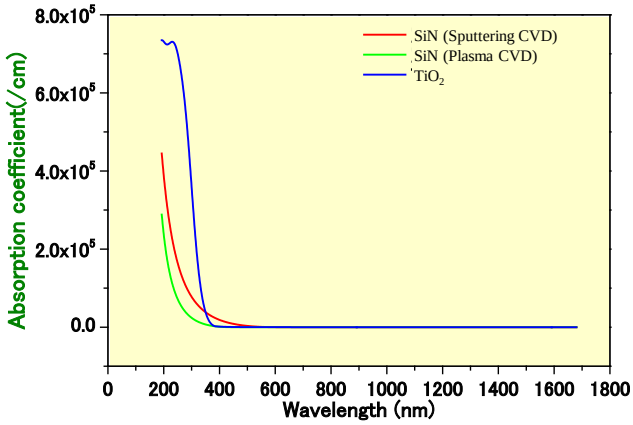


Refractive index distribution

300mm size uniformity of thickness and optical constant can be obtained.

3. Evaluation of Optical Constant and Absorption Coefficient





The refractive index and extinction coefficients of wide wavelength range (from 193nm to 1680nm) can be evaluated.