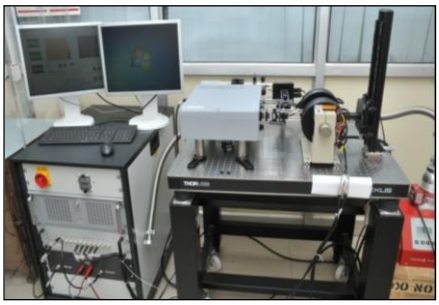
Measurement of: Magneto-Optical-Kerr Effect (NanoMOKE-III) measurements

Equipment: Magneto-Optical-Kerr Effect (NanoMOKE-III)

Property Measured: (i). Spin dynamics, (ii). Domain mapping
(iii). Magnetization of low-dimensional systems
(iv). Perpendicular magnetic anisotropy (PMA)
(v). Surface magnetism

Photograph: NanoMOKE-III



Basic Principle:

The technique behind the NanoMOKE-III is based on the Kerr Effect. The applicability of this technique for common measurements (i.e., Hysteresis loops, domain imaging etc.) are limited because the sample under investigation must be reflecting. Therefore, the Kerr effect is the most commonly used magneto-optical approach where the analysis of the change in polarisation angle of light upon reflection from a magnetic surface is proportional to the magnetization state of the material.

Capabilities:

Magnetic Field	**up to 1200 G (Quadrapole)**
	up to 5000G (Dipole)
Lazer (He-Ne)	**660 nm**
Beam Size	**5 µm**
Temperature	**300 K**
Mode	**Longitudinal, Transverse and polar modes**

Sample Requirement: (a). Thin films (sample should be highly reflecting in nature)
(Toxicity should be mentioned)