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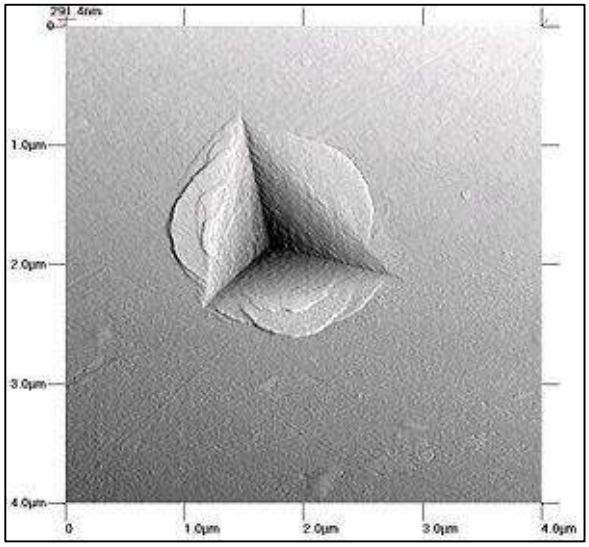
Nano – Indentation



DESCRIPTION

Nano-Indentor is a new generation of ultra-high sensitivity magneto-optical magnetometer and Kerr microscope. It offers high performance laser magnetometer and near video-rate Kerr microscopy in a single machine. It is sensitive to the longitudinal, transverse and polar magneto-optical Kerr effects and is ideally suited to measuring the magnetic properties of thin magnetic films and magnetic nanostructures. Such measurements are commonly made during research and development into :

- ✓ Magnetic nanotechnology
- ✓ Magnetic Random Access Memory (MRAM)
- ✓ Recording heads
- ✓ Patterned magnetic media
- ✓ Spintronics / magneto-electronics
- ✓ GMR / TMR
- ✓ Thin film magnetism
- ✓ Magnetic field sensors

ELLIPSOMETRY

- In ellipsometry, the collected light travels through the sample and its air/liquid environment
- Ellipsometry works the best with very flat and very well reflecting substrates
- In traditional ellipsometry, the optical parameters d or n need to be known
- Ellipsometry is well suited for measurements in air
- There is only 1 channel (channel volume is 1 mL, which makes biological experiments too expensive and without a reference channel difficult to validate)

SPR

- SPR measures from the back of the sample (the collected light does not travel through the sample or the air/liquid environment)
- SPR uses simple substrates with at least one plasmonic layer
- SPR utilizes the Plasmon, which enhances sensitivity of the method especially for metals
- SPR can determine both d and n
- SPR is suited for measurements in gas or liquids
- 2 channels enable easy referencing (channel volume is 1 µL)