HYSTERESIS LOOP TRACER

EXICOR DOMAIN

PRODUCT BULLETIN

A TURN KEY SYSTEM FOR CHARACTERIZING MAGNETIC MATERIALS

Developed in collaboration with researchers in magnetic materials, Hinds Instruments' new Magneto Optic Kerr Effect (MOKE) Loop Tracer has application in the rapid generation of hysteresis loops for the characterization of thin film magnetic materials. The turn key system traces loops based on both the Kerr rotation and Kerr ellipticity data simultaneously.

LEADING EDGE SENSITIVITY AND REPEATABILITY

Using Hinds Instruments' Photoelastic Modulator (PEM) technology, the system provides unrivaled research grade sensitivity. The PEM modulates at 50 kHz and allows the user to trace the Kerr ellipticity (from the first PEM harmonic) and the Kerr rotation (from the second PEM harmonic). Both values can be measured simultaneously.

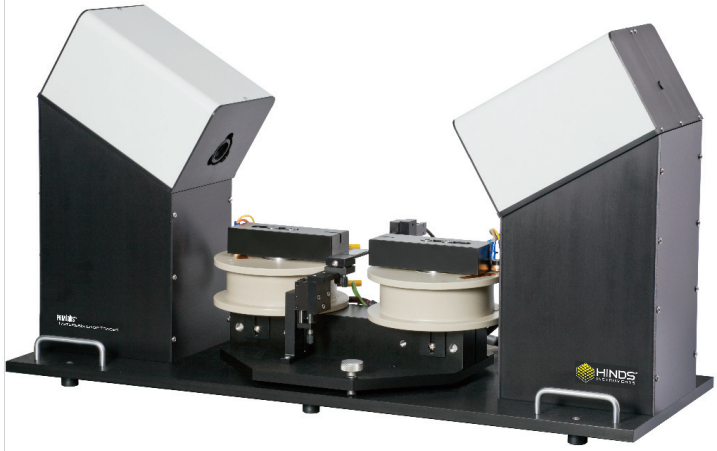
DESIGNED FOR SIMPLE, STRAIGHT FORWARD OPERATION

The PEMLabs™ Hysteresis Looper System is designed in the longitudinal configuration, but conveniently allows the user to turn the magnet 90° and convert to the transverse configuration. The system is also available in a polar configuration.

In addition to Hinds' PEMs, the system benefits from other Hinds proprietary components: two Hinds' Signaloc™ Lock-in Amplifiers and a Hinds' DET-200 photo detector. The user interface has been custom-designed in a friendly, easy-to-use manner.

APPLICATIONS

- Magnetic memory research
- Characterization of magnetic thin films



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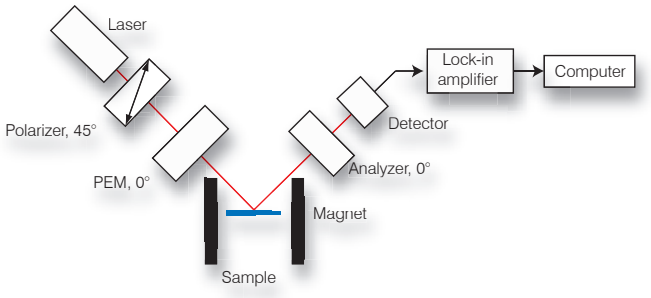


FEATURES

- Hysteresis loop software included with intuitive UI, loop graphing and automated process control
- Highest available sensitivity
- Simultaneous measurement of Kerr ellipticity and Kerr rotation
- High repeatability
- High speed hysteresis loop generation
- Non-destructive
- No moving parts in the optical or magnet system
- Simple set-up allows immediate collection of research-grade data
- Rapid feedback on process variables
- Sample alignment platform with tilt and height adjustment
- Accomodates 30 mm X 30 mm sample

SPECIFICATIONS

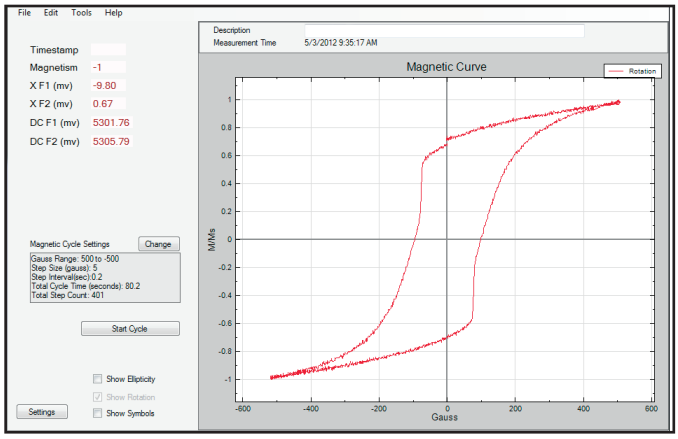
- Light source: 635 nm laser diode
- Polarization analysis method: Hinds' Photoelastic Modulator technology
- Application of magnetic field: Electromagnet
- Maximum magnetic field strength: +/- 2400 Gauss (0.24T)
- Field detection: Hall Probe
- Resolution of magnetic field detection: 0.5 Gauss
- Power supply for magnet: BiPolar
- Sample size: 30 mm X 30 mm
- Size (footprint): 12 in x 31 in (305 mm x 787 mm)

ACCESSORIES AND OPTIONS

- Variable spot size
- Vacuum chuck sample holder
- Water cooling of magnet
- Sample rotation stage
- Transverse magnet configuration
- Higher magnetic field
- XY mapping stage
- Larger samples

Contact a Hinds Instruments representative to discuss:

- Cryostat interface
- Polar and custom configurations



Aunion Tech Co.,Ltd

Room2802, F Building, No. 86 Caobao Road, Shanghai 200235, China

Tel: +86-21-51083793 Fax:+86-21-34241962

E-Mail: info@auniontech.com Website: www.auniontech.com