GDR Telecom Site Energy Systems

Measuring the Magneto-Optical Effect with a Photoelastic Modulator

Overview

In this study, we demonstrate a novel magneto-optical thermometer using a Magneto-optical Kerr Effect (MOKE) system optimally configured with a photoelastic modulator (PEM) that combines the optical and pyro effects of magnetic metal nanofilms to detect transient surface. In this study, we demonstrate a novel magneto-optical thermometer using a Magneto-optical Kerr Effect (MOKE) system optimally configured with a photoelastic modulator (PEM) that combines the optical and pyro effects of magnetic metal nanofilms to detect transient surface. Here, we present a theoretical optimization of common setups based on the magneto-optical Kerr effect. A detection scheme based on a simple analyzer and photodetector and one made from a polarizing beam splitter and balanced photodetectors are considered. The effect of including a photoelastic. Abstract: Instruments based on the magneto-optical Kerr effect are routinely used to probe surface magnetic properties. These tools rely on the characterization of the polarization state of reflected light from the sample to collect information on its magnetization.

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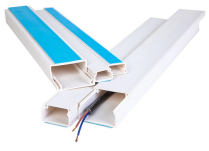
The Magneto-Optic Kerr Effect (MOKE) describes changes to light reflected from a magnetic surface. These changes result from the off-diagonal components of the dielectric tensor.

Here, we present a theoretical optimization of common setups based on the magneto-optical Kerr effect.

A spectroscopic apparatus for measurement of magnetooptical and optical properties of f -electron materials has been designed and established using a polarization modulation technique ...

Experimental results based on near-extinction photoelastic modulated MOKE (NEPEM MOKE) of Fe-Gd nanofilm show that the harmonic ratio achieves a resolution better than 0.02 K over a wide range, ...



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	Here, we present a theoretical optimization of common setups based on the magneto-optical Kerr effect. A detection scheme based on a simple analyzer and photodetector as well as one made from a ...
	Analytic description and optimization of magneto-optical Kerr setups with photoelastic modulation. Instruments based on the magneto-optical Kerr effect are routinely used to probe surface ...

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