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Author

Ohmichi E. Hirano S. Mizuno N. Ohta H.

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Ohmichi Eiji; Hirano Shuya; Mizuno Noriaki; Ohta Hitoshi

Author/Editor Affiliation

Ohmichi E. Hirano S. Mizuno N. : Graduate School of Science, Kobe University, 1-1 Rokkodai-cho, Nada, Kobe 657-8501, Japan

Ohta H. : Molecular Photoscience Research Center, Kobe University, 1-1 Rokkodai-cho, Nada, Kobe 657-8501, Japan

Title

Toward Terahertz ESR Spectroscopy Using a Microcantilever

Source

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Abstract

A new method of high-frequency electron spin resonance (ESR) using a microcantilever is reported. In our technique, ESR signal is mechanically detected while a magnetic field is swept under electromagnetic-wave irradiation. The achieved spin sensitivity was on the order of 10⁹ spins/G at 80 GHz. Using multiple light sources, ESR spectroscopy in the millimeter wave region up to 315 GHz is successfully performed. (7 References).