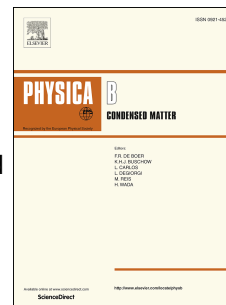


Accepted Manuscript

Optical investigations of the perturbations of Bloch lines stimulated by an electric field in ferrite garnets films

V.E. Koronovskyy, Y.A. Vakyla



PII: S0921-4526(18)30487-3

DOI: [10.1016/j.physb.2018.08.004](https://doi.org/10.1016/j.physb.2018.08.004)

Reference: PHYSB 310991

To appear in: *Physica B: Physics of Condensed Matter*

Received Date: 20 June 2018

Revised Date: 31 July 2018

Accepted Date: 1 August 2018

Please cite this article as: V.E. Koronovskyy, Y.A. Vakyla, Optical investigations of the perturbations of Bloch lines stimulated by an electric field in ferrite garnets films, *Physica B: Physics of Condensed Matter* (2018), doi: 10.1016/j.physb.2018.08.004.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Optical investigations of the perturbations of Bloch lines stimulated by an electric field in ferrite garnets films

V.E. Koronovskyy*, Y.A. Vakyla

Taras Shevchenko Kiev National University, Department of Radiophysics, Electronics and Computer Systems, 4-g, Prospekt Glushkova Street, 03127 Kiev, Ukraine

koron@univ.kiev.ua

ABSTRACT We revealed the magnetoelectric activity effect of vertical Bloch lines of ferrite garnets film in external electric AC field. Effect visually manifested as a broadening of the regions of their localizations. These perturbations are revealed without additional impact of the magnetic field. Magneto-optical measurements and method of optical dark field microscopy with the direct visual observations were used for the investigations.

Keywords: Magnetoelectric effect, Domain wall, Domain structure, Vertical Bloch lines, Dark field microscopy

1. Introduction

Magnetic domain walls (DW) are attracting a sustained interest both from a fundamental perspective and for applications, especially in the context of innovative magnetic memories [1]. At the same time, DW's in ferro- and ferrimagnetics are conventionally driven by magnetic fields or spin polarized currents. However, there are known reports about the development of new techniques to manipulate magnetization by external electric field [2-5]. In particular are known various demonstrations of the electric-field (E-field) control

Download English Version:

<https://daneshyari.com/en/article/8160111>

Download Persian Version:

<https://daneshyari.com/article/8160111>

[Daneshyari.com](https://daneshyari.com)