应用光学 2004 25 (4): 14-17 ISSN: 1002-2082 CN: 61-1171/O4

理论研究

磁光玻璃磁致旋光效应的研究

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收稿日期 修回日期 网络版发布日期 2007-1-27 接受日期

摘要 介绍磁致旋光效应和磁光玻璃磁致旋光效应的机理。对ZF1、ZF6磁光玻璃的磁致旋光效应分别进行了实验研究，给出偏振面旋转角与磁感应强度的关系．计算出波长不变情况下不同磁感应强度的费尔德常数。对实验数据进行了处理．并与理论预期值进行了比较．发现理论值与实验结果符合得较好。

关键词 法拉第效应 费尔德常数 磁光玻璃

分类号 TQ171.1 O482.54

Research on Faraday Effect in Magneto-optic Glass

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Abstract

In this paper,the Faraday effect in magneto-optic glass are introduced,and the experiments are preformed on magneto-optic glass experimental sample ZF1 and ZF6 respectively.The Relationship between the azimuth rotation of the polarization plane of the linearly polarized optical beam and magnetic field strength is indicated by experiment.The Verdet constant under different magnetic field strength(the operating light wavelength is fixed all the time) is calcuated.The experimental results are quite well in agreement with the theoretical value.

Key words Faraday effect Verder constant magneto-optic glass

DOI:

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