

267.

标题: Measurement of Optical Parameters of Organic Solvents by THz Time-Domain Reflection Spectroscopy

作者: Liu, C (Liu Chang); Yue, LY (Yue Ling-yue); Wang, XK (Wang Xin-ke); Sun, WF (Sun Wen-feng); Zhang, Y (Zhang Yan)

来源出版物: SPECTROSCOPY AND SPECTRAL ANALYSIS 卷: 32 期: 6 页: 1471-1475

DOI: 10.3964/j.issn.1000-0593(2012)06-1471-05 出版年: JUN 2012

在 Web of Science 中的被引频次: 0

被引频次合计: 0

引用的参考文献数: 17

摘要: Four kinds of organic solvents, including positive hexane, liquid paraffin, ethyl alcohol, and water, were measured by using terahertz time-domain reflection spectroscopy. According the experiment models, two methods can be used to extract optical parameters. Refractive index and absorption coefficient for these four solvents were extracted with two methods and were compared with the results obtained by transmission measurements, which verified that these methods are correct. This work solved the problem that the optical parameters of sample absorbing strongly terahertz cannot be measured and extracted by using terahertz time-domain transmission system.

入藏号: WOS:000305044100007

语种: Chinese

文献类型: Article

作者关键词: Terahertz time-domain reflection spectroscopy; Organic solvents; Refractive index; Absorption coefficient

KeyWords Plus: LIQUID WATER

地址: [Liu Chang; Yue Ling-yue; Wang Xin-ke; Sun Wen-feng; Zhang Yan] Capital Normal Univ, Dept Phys, Beijing Key Lab Terahertz Spect & Imaging, Key Lab Terahertz Optoelect, Minist Educ, Beijing 100048, Peoples R China

通讯作者地址: Zhang, Y (通讯作者), Capital Normal Univ, Dept Phys, Beijing Key Lab Terahertz Spect & Imaging, Key Lab Terahertz Optoelect, Minist Educ, Beijing 100048, Peoples R China

电子邮件地址: lchzhddl@yahoo.com.cn; yzhang@mail.cnu.edu.cn

出版商: OFFICE SPECTROSCOPY & SPECTRAL ANALYSIS

出版商地址: NO 76 COLLAGE SOUTH RD BEIJING, BEIJING 100081, PEOPLES R CHINA

Web of Science 分类: Spectroscopy

学科类别: Spectroscopy

IDS 号: 955TP

ISSN: 1000-0593

29 字符的来源出版物名称缩写: SPECTROSC SPECT ANAL

ISO 来源出版物缩写: Spectrosc. Spectr. Anal.

来源出版物页码计数: 5