365.
标题: Step-scan time-domain terahertz magneto-spectroscopy
作者: Molter, D (Molter, D.); Torosyan, G (Torosyan, G.); Ballon, G (Ballon, G.); Drigo, L (Drigo, L.); Beigang, R (Beigang, R.); Leotin, J (Leotin, J.)
来源出版物: OPTICS EXPRESS 卷: 20 期: 6 页: 5993-6002 出版年: MAR 12 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: 16
摘要: We present a novel approach for terahertz time-domain spectroscopy of magneto-optic phenomena. The setup used in this work combines a tabletop pulsed magnet and a standard terahertz time-domain spectroscopy system. The approach is based on repetitive operation of the pulsed magnet and step-wise increment of the delay time of the time-domain spectroscopy system. The method is demonstrated by plotting the magneto-transmission spectra of linearly polarized THz pulses through the hole gas of a Ge sample and the electron gas of GaAs, InSb and InAs samples. Cyclotron resonance spectra are displayed in the frequency range from 200 GHz to 2 THz and for a magnetic field up to 6 T. The GaAs spectra are analyzed in more detail using simulations based on the Drude model. (c) 2012 Optical Society of America
入藏号: WOS:000301877700041
语种: English
文献类型: Article
KeyWords Plus: SEMICONDUCTORS; SPECTROSCOPY
地址: [Molter, D.; Torosyan, G.; Beigang, R.] Fraunhofer Inst Phys Measurement Tech IPM, Dept Terahertz Measurement & Syst, D-67663 Kaiserslautern, Germany
[Molter, D.; Beigang, R.] Univ Kaiserslautern, Dept Phys, D-67663 Kaiserslautern, Germany
[Molter, D.; Beigang, R.] Res Ctr OPTIMAS, D-67663 Kaiserslautern, Germany
[Ballon, G.; Drigo, L.; Leotin, J.] CNRS UJF UPS INSA, Lab Natl Champs Magnet Intenses, UPR 3228, F-31400 Toulouse, France
通讯作者地址: Molter, D (通讯作者),Fraunhofer Inst Phys Measurement Tech IPM, Dept Terahertz Measurement & Syst, Erwin Schroedinger Str,Bldg 56, D-67663 Kaiserslautern, Germany
电子邮件地址: daniel.molter@ipm.fraunhofer.de
出版商: OPTICAL SOC AMER
出版商地址: 2010 MASSACHUSETTS AVE NW, WASHINGTON, DC 20036 USA
Web of Science 分类: Optics
学科类别: Optics
IDS 号: 913KW
ISSN: 1094-4087
29 字符的来源出版物名称缩写: OPT EXPRESS
ISO 来源出版物缩写: Opt. Express
来源出版物页码计数: 10