Ultrabroadband THz time-domain spectroscopy of biomolecular crystals

Ultrabroadband THz time-domain spectroscopy based on two-color plasma generation and air biased coherent detection is used for the investigation of molecular dynamics of crystalline materials in the frequency range from 0.3 THz to 20 THz. We show that the spectral features in this extended frequency range are a result of inter- and intramolecular vibrations which are identified by means of simulations of the crystalline materials.

General information
State: Published
Organisations: Department of Photonics Engineering, Center for Nanostructured Graphene, Ultrafast Infrared and Terahertz Science, French-German Research Institute of Saint Louis
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Number of pages: 2
Pages: 1-2
Publication date: 2016

Host publication information
Title of host publication: Proceedings of 2016 41st International Conference on Infrared, Millimeter, and Terahertz waves
Publisher: IEEE
ISBN (Print): 9781467384858
Keywords: Spectroscopy, Time-domain analysis, Plasmas, Crystalline materials, Chemicals, Absorption, Photonics

DOI: 10.1109/IRMMW-THz.2016.7758860
Source: FindIt
Source-ID: 2349437275
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016