International Conference on Free Electrons Laser Applications in Infrared and THz Studies of New States of Matter

Contribution ID : 13

Type : Oral presentation

Nonlinear response of semiconductor systems under intense THz excitation

Tuesday, 5 July 2022 17:35 (20)

Intense narrowband terahertz pulses from the FELBE free-electron laser facility and a complementary tabletop high-field THz source are utilized to study nonlinear excitation regimes of various degrees of freedom in semiconductors. In this talk we present several recent examples including impurity transitions in boron doped Si [1], intersubband transitions in Ge/SiGe quantum wells [2] and plasmons in InGaAs nanowires [3,4].

[1] F. Meng et al., Phys. Rev. B 102, 075205 (2020).

[2] C. Ciano et al., Optics Express 28, 7245 (2020).

[3] D. Lang et al., *Nanotechnology* **30**, 084003 (2019).

[4] R. Rana et al., Nano Lett. 20, 3225 (2020).

Primary author(s): PASHKIN, Oleksiy (Helmholtz-Zentrum Dresden-Rossendorf)
Presenter(s): PASHKIN, Oleksiy (Helmholtz-Zentrum Dresden-Rossendorf)
Session Classification: Tue 05/07 Afternoon 2/ Abstract ID: