

Seminar

Semiconductor spectroscopy by means of second- and third optical harmonic generation in external magnetic fields

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-TRR 142 Guest Scientist-

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Location: Lecture Hall A1, Paderborn

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Abstract

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This talk will give an overview on the recent decade collaboration studies of the TU Dortmund University and the Ioffe Institute on the spectroscopy of semiconductors by means of generation of second and third optical harmonics.

Spectral range in vicinity of the band edge has been studied, where the exciton contributions play an important role for the optical nonlinearities.

Various semiconductors (diamagnetic ZnO, GaAs, CdTe; diluted magnetic CdMnTe and magnetic EuTe and EuSe) have been studied by using external magnetic field as a powerful tool, and various mechanisms responsible for harmonics generation have been found.