Bachelor Thesis / Master Thesis

- Workgroup Terahertz Photonics, Prof. Dr. V. Krozer -

GOETHE UNIVERSITÄT FRANKFURT AM MAIN

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Title: Characterisation of the spectroscopic properties of biological samples in the terahertz regime

Spectroscopy is an important technique for biophysical studies. The absorption properties in different frequency ranges is used for the investigation of structure and function of biological samples.
The project deals with the development of sensor structures for the investigation of biological samples in the terahertz regime.
The thesis should characterise the properties of different simple biological samples like proteins and sugar solutions in the investigated frequency range. The aim is getting a set of calibration samples for the characterisation of different sensor structures.

Tasks:

- Development of an experimental set up for the measurements
- Characterisation of different biological samples
- Development of a calibration standard for the evaluation of the applicability of sensor structures for biophysical purposes

Requirements:

- Basic knowledge of biophysical techniques and sample handling

Contact:
Fabian Dornuf
Raum: _0.214, Tel: 069/798-47203
E-Mail: dornuf@physik.uni-frankfurt.de

Begin: starting from now