

Universität Bern
Institut für Angewandte Physik
Sidlerstrasse 5
3012 Bern
Schweiz

Telefon: +41 (0)31 631 89 11
Telefax: +41 (0)31 631 37 65
E-Mail: IAPemail@iap.unibe.ch
WWW: <http://www.iap.unibe.ch/>

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**UNIVERSITÄT
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Seminar über Ultrafast Science and Technology

Referent: Gregory Gäumann, Institute of Applied Physics, University of Bern

Titel: Nonlinear THz spectroscopy and NIR pump THz ellipsometry

In the first part of this talk measurements on graphene and vanadium dioxide in our high field THz setup will be presented and compared with simulations. For graphene an increase in transmission (saturable absorption) as high as 12% for strong fields is observed and it's dependence on the Fermi level was measured for the first time. The obtained results are compared to a simulation that is based on a simple thermodynamic energy balance. For VO₂ the onset of a THz field induced metal to insulator transition is observed. In the second part recent progress in building up a NIR pump THz ellipsometer is reported and first measurements on silicon and VO₂ are presented.

Zeit: Donnerstag, 19.10.2017, 11:15 Uhr

Ort: **Hörsaal B116**, Gebäude exakte Wissenschaften, Sidlerstrasse 5, Bern, Schweiz