



Seminarankündigung

**Dienstag, 14. Oktober 2014
15:00 Uhr**

WSI, Seminarraum S 101

“Electromagnetic response of graphene and semiconductor low-dimensional electron systems”

It has been predicted and then experimentally observed that graphene is a strongly nonlinear electromagnetic material which demonstrates frequency multiplication, mixing, and other nonlinear phenomena. The characteristic frequency of electromagnetic excitations in the discussed systems lies between microwave and mid-infrared, which makes them promising for applications in microwave, terahertz- and optoelectronics and photonics. In the talk I will discuss the physics of the linear and, especially, nonlinear effects in graphene, as well as in semiconductor low-dimensional electron systems (e.g. GaAs/AlGaAs quantum wells), which have been discovered in recent years.

**Dr. Sergey Mikhailov
Institute of Physics, University of Augsburg
Germany**