Weekly Seminar

Advanced fiber-optic ultrafast sources for multiphoton microscopy

常国庆

Institute of Physics, CAS

Time: 16:00pm, March. 14, 2018 (Wednesday)
时间： **2018年3月14日 （周三）下午 16:00**
Venue: Room W563, Physics Building, Peking University
地点： 北京大学物理楼 西563

Abstract

Propagation of strong femtosecond pulses inside an optical fiber causes fiber-optic nonlinearities and results in numerous interesting nonlinear optical phenomena. We employ fiber-optic nonlinearities to improve the performance of ultrafast fiber lasers. The resulting novel ultrafast laser sources promise important applications in multiphoton microscopy imaging and high-power mid-infrared frequency combs.

About the Speaker

Dr. Guoqing Chang graduated with both Bachelor and Master degrees from Electronics Engineering department of Tsinghua University and Ph.D. degree in Electrical Engineering from the Center for Ultrafast Optical Science at the University of Michigan. After staying at the University of Michigan as a postdoctoral research fellow for about one year, he joined the Research Laboratory of Electronics at MIT as a postdoctoral research associate. In August 2012, he moved to the Center for free electron laser (CFEL) at Hamburg (Germany) as the head of the Helmholtz Young investigator group "Ultrafast Laser Optics and Coherent Microscopy". He was granted tenure in December 2016. Recently he joined the Institute of Physics, Chinese Academy of Sciences through "Hundred Talents Program".

His research has focused on high-power ultrafast fiber lasers (e.g., laser device, oscillator, amplifier, etc.), ultrafast nonlinear optics and femtosecond frequency combs for precision calibration of astronomical spectrographs. At CFEL, his research group aims to pushing the limits of ultrafast laser technologies and apply them to explore broader topics, such as laboratory-based EUV/X-ray source, mid-IR frequency combs for spectroscopy, cavity enhanced ultrafast nonlinear optics, and multi-photon microscopy.