



北京大学量子材料科学中心

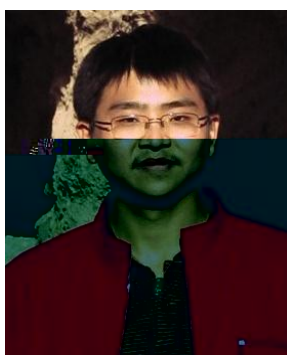
International Center for Quantum Materials, PKU

Weekly Seminar

Ultrafast Spectroscopy Characterization toward Next Generation High Performance Electronic and Optoelectronic Devices

Dong Sun

ICQM, Peking University



Time: 4:00pm, April. 26, 2017 (Wednesday)

: 2017 4 26

4:00

Venue: Room w563, Physics building, Peking University

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Abstract

Ultrafast science & technology is one of the most exciting fields in science and engineering today. In this talk, first introduce basic aspects about ultrafast spectroscopy technologies and their role towards the development of next generation high performance electronic and optoelectronic devices. Then describe several representative works regarding ultrafast spectroscopy characterization of two dimensional materials and topological materials that were performed by our group in ICQM during the past few years. These work includes the following: valley polarization dynamics and exciton dynamics of transitional metal dichalcogenides MoS_2 ; anisotropic response of black phosphorus under high electric field and high magnetic field; and ultrafast photo response of three dimensional Dirac semimetallic Cd_3As_2 .

About the speaker

Dong Sun received his Bachelor degree from University of Science and Technology of China in 2004, and his PhD degree from the University of Michigan, in 2009. He was a research fellow at the Center for Ultrafast Optical Science in University of Michigan, USA (2009-2010, 2011-2012) and Research Scientist in University of Washington (2011). From 2012, he was recruited by 2nd Batch of Youth Thousand Talent Program and worked as associated professor at International Center for Quantum Materials (ICQM), Peking University, where he has lead the ultrafast nano-optoelectronics laboratory in ICQM. His current research interests include using versatile ultrafast spectroscopy tools to study various two dimensional materials and topological materials, targeting on next generation functional device applications, especially in the optoelectronic aspects.