北京大学量子材料科学中心

International Center for Quantum Materials, PKU

Weekly Seminar

Modelling of two-dimensional materials: interfaces, surface, edges and nodes

JI, Wei

Renmin University

Time: 4:00pm, May 25, 2016 (Wednesday)

时间：2016年5月25日 （周三）下午4:00

Venue: Room w563, Physics building, Peking University

地点：北京大学物理楼，西563会议室

Abstract

In this talk, I brief summarize our recent progresses on the modelling of interface interactions of various two-dimensional materials. In addition, air stability of BP was theoretically and experimentally investigated, which reveals the atomic details for the air degradation of BP. Beyond that, I discuss both thermal and beam stability of edges for mono- or bi-layer MoS2 and black phosphorus (BP). In the last part of my talk, I show the formation details of the joint nodes in a radical-formed two-dimensional molecular layer.

About the speaker

Dr. JI, Wei is a computational physicist, working in the field of surface and interface modeling of low-dimensional materials. His research interests include surface and interface modeling of emerging electronic materials and devices. Recently, he is interested in theoretical modeling of electronic, optical, and vibrational properties of two-dimensional materials. He has been also developing theoretical methods for describing beam effects in scanning transmission microscope and understanding ultrahigh resolution in noncontact atomic force microscope. He received his Ph.D in condensed matter physics from the Institute of Physics, Chinese Academy of Science in 2008. Prior to joining Renmin University of China, he spent four years in McGill University as a visiting scholar and then a postdoctoral fellow. He was originally appointed as an Associated Professor by Renmin University in 2010 and was early promoted to Full Professor in 2014. He was supported by the national young top-notch talent program in 2015 and awarded Chang-Jiang young scholars in 2016. He also serves as trustees in the youth committee and computational materials science division of the Chinese Materials Research Society.