

SPECIAL FOCUS

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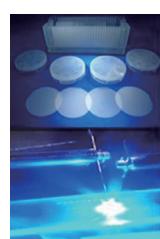
Overview

Xiamen University, named as one of the most beautiful campuses in China, is one of the “985” key universities (a national project to build world-class universities, announced in May 1998 by China government). The Department of Physics, founded in 1923, is among the earliest established departments of physics in China. The faculty members include academicians of the Chinese Academy of Science, senior and young experts under 1000 Talent Plan, National Distinguished Young Scholars, New (Cross) Century Excellent Talents of the Ministry of Education, and other titled distinguished professors. The research areas are diverse, focusing on different aspects of the frontiers of physics, while featuring cross-discipline collaboration.

Research Areas

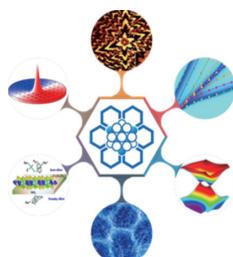
• Semiconductor optoelectronic materials and devices

The semiconductor discipline of Xiamen University has a long historical standing. It is one of the earliest five universities that established the major of semiconductor physics. This discipline is dedicated to the development of semiconductor optoelectronic materials and devices. It has gained an important position in the research field of semiconductor materials and devices based on Ge, Si, AlGaN, ZnO, and SiC. This discipline holds several ministerial, provincial, and municipal research platforms, and owns state-of-the-art experimental facilities for semiconductor material growth, device fabrication and characterization, such as MOCVD, UHV-CVD, MBE, electron beam evaporator, and UV mask aligner.



• Low-dimensional condensed matter physics

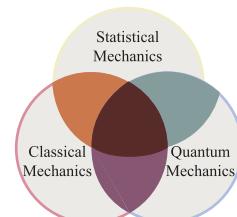
In the past decade, DoP has developed further and formed a new dominant direction, low-dimensional condensed matter physics. Our research areas focus on three divisions, i.e., theoretical & computational simulations, growth & characterization of materials, and development & applications of devices. We are dedicated to the basic



and applied researches, including low-dimensional condensed matter theory; magnetism of low dimensional materials and its related device physics; manipulation of light field and high order quantum information technology; preparation, characterization & applications of graphene & related materials; and preparation & applications of mesoporous materials.

• Statistical physics and related interdisciplinary fields

Statistical physics and thermodynamics have developed as key disciplines in Xiamen University since 1980's. So far groups for modern thermodynamics, complex systems, life systems, and quantum statistical physics have been established, and some significant progress in these fields has been achieved. The team from Xiamen University has been recognized as one of the “strongest” teams in China that promote the study of statistical physics.



• Biomimetics/mesoscopic soft matter research and flexible devices

The research activities from the Research Institute for Biomimetics and Soft Matter (Bio Smat) focus on the correlation between the mesoscopic structure and soft materials in terms of structural formation mechanism, mesoscopic functionalization and reconstruction. Biomimetic principles and concepts are adopted to design and fabricate functional/smart flexible materials applicable to bio/flexible electronics, seniors and energy devices. In combination with state-of-art technologies of internet, cloud communication, big data and AI, we are devoted to implementing the ideas of smart medication, smart elders care, smart family and smart health living, which will re-shape our living style in the years to come.

