



复旦大学物理系 物质科学报告

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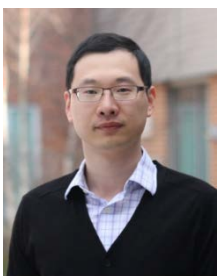
Location: Physics Building (Jiangwan), Room C108

Topological Spin Textures in Chiral Magnets

Jiadong Zang

Department of Physics, University of New Hampshire, USA

Chiral magnets are a series of magnets with broken inversion symmetry. A new type of spin interaction therein, the Dzyaloshinskii-Moriya interaction, stimulates the formation of many novel topological spin textures. One typical example is the magnetic skyrmion, whose nontrivial topology enables unique dynamical property and thermal stability, and gives out promise on future magnetic memory device. In this talk, I will comprehensively review the skyrmion physics. Also I will present three other relevant spin textures we discovered. One is the target skyrmion we recently observed, both theoretically and experimentally, in ultra-small nanodisks of chiral magnets. Zero-field target skyrmions and their polarization switch will be discussed. Putting in heterostructures, we also found a new type of topological configuration dubbed the Hopfion therein. Finally, I will discuss emergent topology driven by thermal fluctuations.



个人简介：臧佳栋 1984 年出生于浙江宁波。2007 年获复旦大学学士学位，2012 年获复旦大学理论物理博士学位，毕业后到美国霍普金斯大学做博士后研究，并于 2015 年起在美国 University of New Hampshire 大学物理系和材料系担任助理教授。长期从事凝聚态理论研究，重点研究低维磁性材料和拓扑物态的研究，主持美国能源部和科学基金委多项课题。发表论文 30 余篇，引用 2000 余次，其中包括 Nature Materials, Science Advances, Nature Communications, Phys. Rev. Lett. 等多篇有影响力文章。受邀为 Science, Nature, Physical Reviews 等国际期刊的论文审稿人。

