



复旦大学物理系 Colloquium

Time: 14:00, Tuesday, 2024.6.4

Location: C108, Jiangwan Physics Building

Experimental investigations on the nickelate high- T_c superconductors

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Abstract: Since the discovery of superconductivity at 80 K in single crystals of $\text{La}_3\text{Ni}_2\text{O}_7$ at pressures above 14.0 GPa, extensive efforts have been made to understand the properties of the bilayer nickelate system at both ambient and high pressures. CDW, SDW, structural transition, strange metal behavior, orbital dependent correlations, etc. which are profound in copper oxide and iron-based superconductors also present in the pressure-dependent phase diagram of $\text{La}_3\text{Ni}_2\text{O}_7$. They may be related or irrelevant to the superconductivity of nickelates under pressure. Currently, many questions are open. In this talk, I will briefly introduce the discovery of the superconductivity in $\text{La}_3\text{Ni}_2\text{O}_7$ and discuss the research progress in nickelate superconductors.



报告人简介: 中山大学物理学院教授、博士生导师，现任中山大学物理学院副院长、广东省磁电物性分析与器件重点实验室副主任、物理学院中子科学与技术中心主任。王猛教授本科毕业于吉林大学物理学院，博士毕业于中国科学院物理研究所超导国家重点实验室，之后在加州大学伯克利分校物理系开展博士后研究工作。王猛教授已发表论文80余篇，包括Nature、Nature Physics、Nature Communications、Physical Review Letters、Physical Review B等杂志，是Science China-PMA杂志青年编委，担任Nature、Nature Physics、Physical Review Letters等杂志审稿人，成果入选“两院院士评选2023年中国十大科技进展新闻”、“2023年中国重大科学、技术和工程进展”。王猛教授研究兴趣包括非常规超导材料和量子磁性材料的物性及机理研究，研究方法包括材料生长、中子散射、高压技术等，推动并参与中国首台高能非弹性中子散射飞行时间谱仪建设。