



复旦大学物理系 Colloquium

Time: 14:00, Tuesday, 2021.05.11

Location: Room C108, Jiangwan Physics Building

Liquid-liquid phase transition in systems with anomalous behaviors

徐莉梅

北京大学物理学院

Abstract: A group of materials, such as water, Ge and Si, show many anomalies different from most of other materials. The underlying mechanism of such anomalies have attracted extensive attentions. The hypothesized liquid-liquid phase transition and its critical point, usually buried deep in the supercooled region which is very difficult to detect due to easy crystallization, have been proposed to explain such anomalies. Such hypothesis is still of debate mainly due to lack of direct experimental confirmation. In this talk, I will discuss our recent progress on the understanding of such systems showing anomalies with predicted liquid-liquid phase transition. We also propose possible approaches for experiment to verify the existence of the hypothesized liquid-liquid phase transition.



主讲人简介: 徐莉梅，北京大学博雅特聘教授，物理学院副院长。本科毕业于北京师范大学，于美国波士顿大学获得博士学位。2007-2011年先后在犹他大学化学系和日本东北大学从事博士后研究和担任助理教授；2011年至今先后任北京大学副教授、教授。主要从事平衡与非平衡相变及临界现象、水的特性等方面研究，在相关领域发表多篇重要学术论文，包括Nature、Nature子刊、PNAS、PRL等，并受邀在顶级期刊Chemical Reviews撰写综述文章。部分工作入选2018年中国科技十大进展；获2019年教育部自然科学一等奖。主持参与多项国家自然科学基金、科技部重点研发项目；担任多个国际期刊副主编、编委。2011年入选“国家海外高层次人才计划”。