



Seminar

Chiral phonon in kagome superconductor CsV₃Sb₅



Dr. ChenNan Wang

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Time: 10: 30Am, Oct. 13, 2025 (Monday)

时间: 2025年10月13日 (周一) 上午10: 30

Venue: Room w563, Physics building, Peking University

地点: 北京大学物理楼, 西563会议室

Abstract

The question of time-reversal symmetry breaking in CsV₃Sb₅ remains an open and debated topic, with no definitive consensus established to date. Conventional magnetic field-sensitive probes have not conclusively confirmed the presence of time-reversal symmetry-breaking fields. This presentation will address this crucial aspect through a new study into the optical coherent phonon modes. Our observations reveal a lifting of the energy degeneracy of the E_{2g} modes, which also exhibit a pronounced contrast to the helicity of the circularly polarized light. I will discuss the underlying origins of this observed phenomenon and delineate its implications concerning the potential breaking of time-reversal symmetry in this material.

About the speaker

Chennan Wang obtained his PhD at the University of Fribourg in the group of Prof. Christian Bernhard. He did his postdoc at ICQM between 2017-2019 with Prof. Nanlin Wang. In 2019-2022, he works at the Swiss muon source, Paul Scherrer Institute as a beamline scientist. Currently, he works at the University of Fribourg as a senior researcher. Chennan's research focuses on the study of electronic and magnetic properties of quantum materials, utilizing optical spectroscopy and muon spin rotation techniques.