



復旦大學

Fudan University



復旦大學物理系物質科學報告

Physics Department Colloquium

Exploring quantum spin-frustrated materials

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Abstract: Quantum spin-frustrated materials have attracted much attention and always been one of the frontiers in condensed matter physics for quite a long time, as quantum spin liquid (QSL) and many other exotic quantum states may be realized in this kind of materials. In this talk, I will introduce the exploring of three types of spin frustrated compounds synthesized by our group: herbertsmithite $(\text{Co,Ni})\text{Cu}_3(\text{OH})_6\text{Cl}_2$, brochantite $\text{ZnCu}_3(\text{OH})_6\text{SO}_4$ and triangular YbMgGaO_4 with strong spin-orbit coupling, with particular emphasis on the last one. By combining careful thermodynamics measurements and microscopic magnetic probes like μSR , NMR and neutron scattering, we demonstrate that the latter two new compounds are promising QSL candidates and favor a picture of U(1) gapless QSL.

Time: 2:00pm, Tuesday, June 27, 2017
Location: Physics Building, Room 221B
(Cookies and coffee are served from 1:30 pm)