



“Spin liquids: the holy grail of quantum magnetism”

I will describe recent experimental progress in the quest to study novel ground states in quantum magnets. New states of matter may be produced if quantum effects and frustration conspire to prevent the ground state from achieving classical order. The famous quantum spin liquid state has been theoretically proposed decades ago and has only recently been experimentally realized. These spin liquids are believed to feature long-range quantum entanglement and support exotic excitations. A recent breakthrough in crystal growth has led to the discovery of spin liquid physics in a material based on the frustrated kagomé lattice. Inelastic neutron scattering measurements reveal that the spin excitations are fractionalized, a remarkable first.

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