

Postdoctoral Position at PSI, Switzerland

Probing and tuning frustrated quantum magnets with nuclear spins

This project aims at studying the influence of nuclear hyperfine coupling on rare earth quantum magnets, especially in cases where the hyperfine interaction competes significantly with the interactions among electronic spins. Of particular interest are pyrochlore materials that might realize 3d quantum spin ice.

The goal of this project is to theoretically work out the rich phenomenology of such coupled electron-nuclear systems, in and out of equilibrium. A second integral part of the project is to come up with concrete suggestions for interesting experimental implementations to be realized and measured in house.

We are looking for a candidate with a strong background in frustrated quantum magnetism, who enjoys close exchange with experimentalists.

Possible start of project: Between 1st January and 1st October 2019

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