



The Paul Scherrer Institute PSI is the largest research institute for natural and engineering sciences within Switzerland. We perform cutting-edge research in the fields of matter and materials, energy and environment and human health. By performing fundamental and applied research, we work on sustainable solutions for major challenges facing society, science and economy. PSI is committed to the training of future generations. Therefore about one quarter of our staff are post-docs, post-graduates or apprentices. Altogether PSI employs 2100 people.

For the Condensed Matter Theory Group at PSI we are looking for a

Theoretical Condensed Matter physicist

working on frustrated quantum magnetism / spin liquids

Your tasks

This position is associated to a joint theory-experimental project, offering the prospect of a close interaction with experimentalist and short term realizations of interesting theoretical ideas by in house experiments, involving material fabrication, neutron scattering and optical spectroscopy. Your task as a theorist encompass to

- Investigate the rich phenomenology of quantum spin liquids of rare earth compounds where the electronic spins couple non-perturbatively to nuclear spins
- Investigate new probes that employ nuclear spins to tune local fluctuations in a quantum magnet
- Establish an open-source tool box assembling key data of rare earth compounds, their interactions and their likely phase diagram
- Make specific predictions about interesting new phenomena in tailored materials, especially in rare earth pyrochlores, to be realised in in-house experiments

Your profile

- You have solid working experience in frustrated quantum magnetism and you master some advanced techniques (analytical or numerical, ideally both) to describe such systems
- You enjoy studying and predicting phenomena in real materials
- You like the interaction with experimentalists

We offer

Our institution is based on an interdisciplinary, innovative and dynamic collaboration. You will profit from a systematic training on the job, in addition to personal development possibilities and our pronounced vocational training culture. If you wish to optimally combine work and family life or other personal interests, we are able to support you with our modern employment conditions and the on-site infrastructure.

This is a fixed-term position. The employment contract will (initially) be limited to 2 years.

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For further information please contact Dr Markus Müller, phone +41 56 310 44 10.

Please submit your application online (including list of publications and addresses of referees) for the position as a Theoretical Condensed Matter physicist (index no 4801-00).

<https://www.psi.ch/pa/stellenangebote/1938>

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