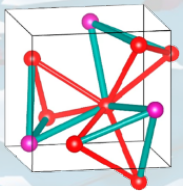
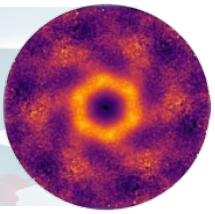
Laboratory for Quantum Magnetism - LQM
Institute of Physics - IPHYS
Faculty of Basic Sciences - FSB



PhD position in Physics:

Experimental studies of Classical and Quantum Spin Liquids



At the Laboratory for Quantum Magnetism (LQM) we perform fundamental research in magnetism and correlated electron materials. Our core activities span from synthesis of novel materials over in-house experimental techniques in combination with low temperature, high pressures and high magnetic fields, neutron and X-ray scattering to theory and modeling. The LQM is part of the École Polytechnique Fédérale de Lausanne (EPFL), a world-renowned research and education center, offering an ideal academic environment as well as an excellent connection to industry.

The open PhD position is focused on the investigation of a novel magnetic network of spins, recently shown to be realized in a family of compounds called langbeinites. It supports an exotic type of spin-liquid behavior, which we aim to investigate in a variety of related compounds. Two recent publications relevant to the position can be found *in* *Nature Communications* and *Physical Review Letters*.

The project aims to probe several new promising compounds belonging to this family. The candidate will have an opportunity to participate in experiments utilizing a variety of probes, including magnetization, specific heat, NMR, neutron and x-ray scattering and muon spectroscopy.

We offer a challenging and exciting project in the field of experimental quantum magnetism under the supervision of Dr. Ivica Živković and Prof. Henrik M. Rønnow. Some of the experimental techniques are situated in our laboratories but we also rely on regular visits to large-scale facilities for neutron, x-ray and muon-based experiments.

We are looking for a highly motivated candidate with a master in physics or related fields. The successful candidate has a strong command of solid-state physics and quantum mechanics, good communication skills in English (spoken and written) and a willingness to learn and engage in challenging research.

Applications should include grade transcript, CV, motivation letter and three contact persons for references. Applications should be sent to Dr. Ivica Živković (ivica.zivkovic@epfl.ch). You are also very welcome to contact us for more information. We encourage people of all backgrounds and genders to apply.

The selected PhD student will need to enroll in the physics program of the EPFL doctoral school. After one year of successful probation, the initial contract will be extended up to a total of four years. Doctoral school information and employment conditions at EPFL are described at:

- https://www.epfl.ch/education/phd/programs/edpy-physics
- https://www.epfl.ch/education/phd/doctoral-studies-structure/doctoral-students-salary
- https://www.epfl.ch/about/working/working-at-epfl/employment-conditions

Starting date: January 2025. The position remains open until filled.

École polytechnique fédérale de Lausanne

LQM - Laboratory for Quantum Magnetism

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