



Karlsruher Institut für Technologie

**Experimental PhD position in
Spin- and Lattice Dynamics of Kagome Systems and Altermagnets
within the collaborative research center TR228**

Within the collaborative research center ELASTO-Q-MAT (see <https://transregio288.org>) between the Karlsruhe Institute of Technology (KIT), the Universities of Frankfurt and Mainz we look for an experimental PhD student in project B06 - Static and dynamic coupling of lattice and magnetic properties in low-symmetry two-dimensional materials - located at the Physikalisches Institut at KIT in the group of Prof. Wulf Wulfhekel.

The project deals with the newly found material class of altermagnets and magnetic kagome systems, structures that behave two-dimensionally much alike van-der-Waals materials, but with broken time reversal symmetry due to magnetic ordering. The aim is to study the strong effects expected in these materials caused by the coupling of the lattice degrees of freedom to the spin, i.e. magnon-phonon coupling, chiral phonon formation and non-trivial topology of magnons.

The candidate will work in close cooperation with our theory partner in Mainz and will characterize kagome systems and altermagnets with state-of-the-art equipment including spin-polarized Scanning Tunneling Microscopy (STM) at 25 mK. We offer a stimulating work environment and elaborate training within the research center. A background in magnetism, thin films, two-dimensional materials, scanning probe microscopy or low temperature physics are welcome.

Review of applications begins immediately and will continue until the position is filled. Applicants should send a CV, a letter of motivation and contact information of recommending colleagues to Wulf.Wulfhekel@kit.edu.

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