

Postdoc Position: Cavity control of rare earth ions

At: Karlsruhe Institute of Technology, Germany

We are inviting applications for a **two-year Postdoc position in the group of Prof. David Hunger at the Karlsruhe Institute of Technology, Germany** (www.phi.kit.edu/hunger.php). The group is exploring applications of fiber-based optical microcavities in the fields of solid state quantum optics, optical sensing, microscopy, spectroscopy, and optomechanics. One of the central goals is to enhance light-matter interactions to realize efficient light-matter interfaces at the single quantum level, and to enable novel schemes for spectroscopy and sensing.

The advertised project aims at realizing an efficient optical interface and advanced control for rare earth ions in solids with open-access optical microcavities. Rare earth ions provide exceptional optical and hyperfine coherence, which makes them promising candidates for quantum optical applications, ranging from quantum memories to quantum computing. Building on recent work (Casabone et al., arXiv:1802.06709), we want to develop an extended toolbox for advanced control of ensembles and individual ions.

The project is funded within a Helmholtz Recognition award and the European Union 7th Framework Program (FETOpen Project NanOQTech, www.nanoqtech.eu), and is in close collaboration with leading groups in the field of rare-earth ion spectroscopy.

We seek for a creative and motivated individual to advance this research project. Experience in the fields of quantum optics, cavity QED, or solid state spectroscopy is required.

Applications should include

- a Curriculum Vitae (including details about previous research experience and skills)
- list of publications
- academic records (Masters or diploma, including grades)
- an informal statement about your research interest (max. 1 page)
- contact information of two referees

For further inquiries and applications please contact Prof. David Hunger (david.hunger@kit.edu).

This message was sent in the 'GDR IQFA mailing list'.