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## Postdoc and Ph.D. positions in Solid-State and Optical Quantum Device Technology

Full-time postdoc and Ph.D. positions are available in the Hong group (<https://www.fmq.uni-stuttgart.de/hong-group/>), the newly established lab at the Institute for Functional Matter and Quantum Technologies, the University of Stuttgart.

Our group focuses on developing novel quantum technologies based on solid-state and optical systems. By combining various resources like optical microcavities and mesoscopic mechanical oscillators, we aim to build entirely new quantum devices that exhibit all the excellent features of individual elements. We will use these devices to develop new sensing and information processing applications and to probe fundamental questions in quantum physics.

We are looking for motivated researchers who share our interest in developing novel quantum technologies and can perform independent research in collaborative environments. Successful candidates will be involved in the research on realizing a new type of hybrid quantum control platform for optically levitated dielectric nanoparticles. For more details, please visit the group website or contact Prof. Sungkun Hong. The project requires technologies in various fields, including quantum optics, optical trapping, and nanophotonics. Applicants with expertise in any of the following areas will, therefore, be highly valued:

- Quantum optical measurement and control
- Optical trapping and manipulation
- Design and fabrication of nanophotonic devices (e.g., waveguides and cavities)
- Optics/mechanics simulation with modeling software like COMSOL

Situated at one of the biggest high-tech centers in Europe, the University of Stuttgart offers an exceptional research environment for quantum science and technology. Members of the Hong group will work in state-of-the-art lab facilities at the Center for Applied Quantum Technology (ZAQuant) on campus. The Integrated Quantum Science and Technology Center (IQST) will provide unique opportunities for cross-disciplinary collaboration with researchers from Ulm University, Max Planck Institute for Solid State Research, and innovative industrial companies around the region.

Interested applicants should send a letter of motivation, a CV, and contact information for three references to Prof. Sungkun Hong ([sungkun.hong@fmq.uni-stuttgart.de](mailto:sungkun.hong@fmq.uni-stuttgart.de)). Review of applications will begin immediately and continue until the positions are filled.