





UNIVERSITÄT HEIDELBERG ZUKUNFT SEIT 1386



2024 PHD & POSTDOC OPENINGS

We are happy to announce two openings — one for a **PhD student** and one for a **Postdoctoral fellow** — at our ultracold dysprosium experiment in Heidelberg, named DyLab, in the Quantum Fluids group led by Prof. Lauriane Chomaz.

We started to assemble DyLab in 2022. Based on highly magnetic dysprosium atoms cooled to the nanokelvin range, it produced its first Bose-Einstein condensates and its first in-situ images of droplet crystal states in 2023. In this platform, where we will be able to probe and perturb quantum states with sub-micron resolution, we are interested in exploring the emergence of many-body behaviors in and out of equilibrium from the competition of interparticle interactions with a special focus on low dimensions.

By joining the group at this pivotal stage, you will conduct experiments on our state-of-the-art platform to explore and understand which exotic phases such as supersolids form in quantum gases under the influence of dipolar interactions in lower dimensional space, how these orders arise in terms of phase transitions and dynamics across them, how these states behave far out of equilibrium and how they equilibrate, which topological defects they host and what are their specific roles.

We are an international team working in a rich multicultural academic environment with a strong collaborative spirit. We are funded by an ERC grant and part of an excellence cluster, a German collaborative research center and a bilateral collaboration. We are looking for talented and highly motivated candidates, with preferably a background in quantum or atomic physics.

For details on the positions and to apply, please contact me via email chomaz@physi.uni-heidelberg.de. Applications will be considered on a rolling basis and reviewed continuously.

If you want to join this adventure with us, send your application to chomaz@physi.uni-heidelberg.de

