Call for a Diploma Student

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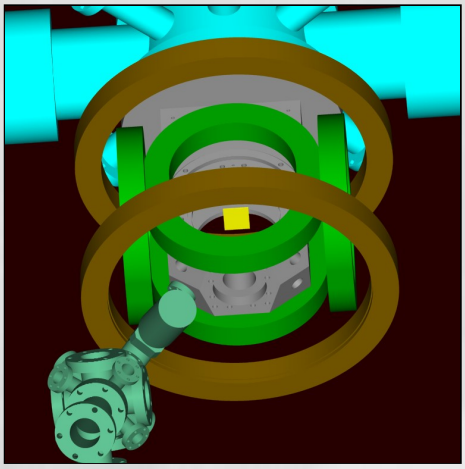
Dual-Species Atom Chip Traps

Prof. Jörg Schmiedmayer



Degenerate Fermi gases (DFGs) are at the forefront of ultracold atom research. They have ramifications not only for atomic physics, but also for solid-state physics, since cold atomic systems can be used to model complicated solid-state systems such as superconductors. Here at the TU-Wien Atominstitut, we use laser cooling and atom chip technology in a new experiment to study an ultracold degenerate Fermi gas of potassium-40 and Bose-Fermi mixtures of rubidium-87 and potassium-40.
The focus of the Diplomarbeit will be the creation of the Bose-Fermi mixture using the technique of sympathetic cooling.

We offer

- The opportunity to learn a series of modern techniques in experimental physics and quantum optics, including UHV technology, laser stabilisation, precision imaging and image processing, low-noise electronics, optics and opto-mechanics.
- A hands-on experience in an ultracold atom lab.

We expect

- Someone who is motivated to learn and is interested in quantum physics, laser cooling, and atomic physics.
- A team-player who is willing to work hard.
- Basic knowledge of atomic and laser physics.
- Fun during the project!

Contact:

Prof. Jörg Schmiedmayer
AtomChip Group
schmiedmayer@atomchip.org

or

Dr. David A. Smith
AtomChip Group
d.a.smith@atomchip.org

www.atomchip.org