Leibniz Universität Hannover

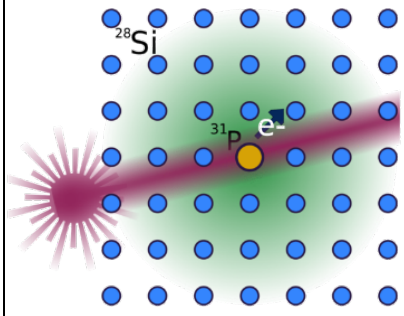
Institut für Festkörperphysik

Open PhD Position

Spectroscopy of isotopically pure ^{28}Si:P

Laser control of donor qubits

This project comprises the experimental optical investigation of the spin dynamics in isotopically purified silicon via optical laser spectroscopy at low temperatures down to 30mK. The spin decoherence of localized, phosphor bound electrons can be massively prolonged by isotopically enriching the nuclear spin-free isotope ^{28}Si, which is a prerequisite in a potential solid-state spin-based quantum information processing. The samples are provided via a collaboration with the *Avogadro* project. This project focusses on the experimental investigation of the complex spin dynamics in an advanced laboratory environment.



Requirements: We expect an appropriate academic education with a master degree or equivalent in physics – preferably in solid state physics or quantum optics – a broad interest in physics.

For application please send a short letter motivating your interest with a summary of your educational background and if possible at least one letter/statement of support.

- Further information can be found on http://www.fkp.uni-hannover.de/oestreich

Contact: Prof. Dr. Michael Oestreich, Institute for Solid State Physics,
Leibniz Universität Hannover
oest@nano.uni-hannover.de

The PhD position for young researchers is available from June 2022 onwards and remunerated acc. E13 with negotiable part time fraction. Equal opportunities for women in research are supported.