Quantum computing: Development of a Faraday module for a quantum processor unit

Contact

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Work content

Quantum computers use 2-state quantum systems and quantum entanglement instead of conventional bit states. The experimental basis of the underlying quantum systems are ultracold charged atoms, which are generated, controlled and functionalized (entanglement) in a cryogenic ultra-high vacuum with a magneto-optical trap. The focus of the experiment is the complete shielding of the technology platform with a Faraday Module (FM) within the Quantum Processing Unit (QPU). This Faraday module is part of the QPU's attachment frame and requires integration based on *transient liquid phase* (TLP) bonding. In this way, a compact quantum system can be enabled by progressive integration density.

Please send me your **complete** application documents by mail.

Type of work

Bachelor and student work

Requirements

Interested, independent and capable students of **mechanical engineering, nanotechnologies and physics**

Starting date

As of now

07.08.2023