



**ISOQUANT**  
SONDERFORSCHUNGS-  
BEREICH 1225



**UNIVERSITÄT  
HEIDELBERG**  
ZUKUNFT  
SEIT 1386

## Nanomaterials for Optoelectronics – Master Thesis

The Nanomaterials for Optoelectronics Group, led by Prof. Dr. Jana Zaumseil at Heidelberg University, is pleased to announce an exciting opportunity for a Master's thesis project. We invite motivated and enthusiastic candidates to join our team for a master project on developing, building, and testing a new setup for near-infrared charge modulation spectroscopy at cryogenic temperatures. The aim is to characterize and understand the absorption and emission signatures of excitons and trions (charged excitons) in weakly to moderately doped one-dimensional semiconducting single-walled carbon nanotubes.

The project will be conducted within the framework of the Collaborative Research Center 1225 ISOQUANT.

### Requirements

- Enrollment in a Master's program in Physics or Chemistry at Heidelberg University
- Some hands-on experience with optical spectroscopy or optoelectronics devices
- Interest in building new optical setups including their integration with software (e.g., Python, Labview)
- Good communication skills (English, German)

### Benefits

- Gain hands-on experience with state-of-the-art research equipment and techniques.
- Work in an interdisciplinary, supportive and diverse research group.
- Contribute to cutting-edge research in nanomaterials and optoelectronics.
- Potential extension toward a doctoral researcher position after graduation.

### Application

Interested candidates should send an Email to [zaumseil@uni-heidelberg.de](mailto:zaumseil@uni-heidelberg.de) with

- Short motivation and explanation of relevant experience
- Short curriculum vitae (CV)
- Academic transcripts

### Deadline

Applications will be reviewed on a rolling basis until the position is filled. Early submission is encouraged.

For more information please contact:

### Prof. Dr. Jana Zaumseil

Nanomaterials for Optoelectronics Group

<https://www.pci.uni-heidelberg.de/apc/zaumseil/index.html>

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