

Master's Thesis in Materials Chemistry/Spectroscopy/Optoelectronics

The Feldmann Lab at EPFL combines ultrafast magneto-chiroptical spectroscopy and materials chemistry to transform the way we produce and consume energy as a society.

For this, we explore the concept of symmetry breaking in novel soft semiconductors and nanomaterials to control charge, spin and light with these printable materials.

We work on uncovering the design rules which enable the next generation of cheap, efficient and flexible solar cells & ultra-bright displays, and unlock entirely new applications in quantum information technology. For more information, please check out www.feldmannlab.com.

Our international, diverse team features chemists, physicists, materials scientists, electrical engineers and computer scientists alike, in order to tackle the biggest fundamental and applied research questions together. Some of the questions we find interesting right now are outlined [here](#).

Your detailed research plan (e.g. on chirality, solar, light emission, spin selectivity, quantum tech., or spectroscopy development) will be determined based on *your* personal interests together.

We offer:

- World-class, brand-new labs including wetlab chemistry, gloveboxes, device fabrication, and [unique spectroscopy tools](#), some of which we have developed
- Location near the Swiss Alps in one of the places with the highest quality of life worldwide
- A team that is warm, welcoming, and fun to work with
- Development of *your* desired skill set (thesis topic can be focussed on either the synthesis of materials, spectroscopy, or device prototyping)

As a new addition to our team, these are the things we are looking for in you:

Mandatory skills:

- Enrollment in a Physics, Chemistry, or Materials Science degree, or a related discipline
- Enthusiasm for interdisciplinary research, from materials chemistry, optics and semiconductor physics to spectroscopy to devices, all the way to spintronics and quantum state preparation
- Team spirit: the desire to share your experience with others in the group, to mentor younger group members, and not to be afraid to seek help and learn from your teammates
- Excellent spoken and written English language skills

A plus would be:

- Initial experience with working in a spectroscopy lab and/or in a chemistry lab
- Initial experience with optoelectronics or magneto-optical measurements; work on solution-processable semiconductors or magnetic or chiral materials

Please apply to Sascha directly *via* email to feldmann@cantab.net using the subject line "*Master's application for EPFL – Your Name*". Your application can only be considered, if you provide in a single pdf-document: a brief statement of motivation (max. 1 page), your CV, incl. grades, and the contact details of 1 to 2 references that are prepared to be contacted. Applications will be considered continuously. Funding for living costs must be provided by a scholarship or other means.

Earliest start date: June 2024.



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