

# Ph.D. Cotutelle Student in Spincaloritronics

We offer a double degree Ph.D. position between the Charles University in Prague and our collaborating institutions in Germany (University of Konstanz, Technical University Dresden). On the Czech side the candidate would be involved in research at FZU – Institute of Physics of the Czech Academy of Sciences, a leading public research institution located in Prague, Czechia. FZU is the largest institute of the Czech Academy of Sciences with more than 1100 employees. FZU pursues high-quality, innovative, and ground-breaking fundamental and applied research.

The candidate would become a member of the newly established [Dioscuri Centre for Spin Caloritronics and Magnonics](#) at the Institute of Physics of the Czech Academy of Sciences in Prague. The position is competitively funded by a research grant.

The successful candidate (m/f/d) will join a dynamic research team led by [Helena Reichlová](#) focused among other projects on the development of new concepts for future information technology with reduced energy consumption. On the German side, the candidate will join the team of Prof. Sebastian Goennenwein.

## What you will do

- Characterization of altermagnetic materials (magnetometry, X-Ray)
- Design and fabricate nanostructures for spin transport measurements
- Measurements and analysis of spincaloritronic phenomena in altermagnetic materials
- Develop a unique magnetic microscopy technique based on spincaloritronic phenomena
- Apply the spatially resolved technique on studied nanostructures
- Prepare manuscripts
- Present results at international conferences and schools

## Expected results

- Successful preparation of nanodevices
- Observation of key spincaloritronic effects in emerging class of altermagnets
- Building the setup for magnetic microscopy and its using for spatially resolved measurements

## Required qualifications

- Bachelor's degree (active master's student) or master's degree in chemistry, physics, material science
- Advanced English - written and spoken
- Previous experience with spin transport and nanolithography welcomed

## Benefits

- Working in an international and creative environment
- Unique research facilities
- Training and development possibilities (seminars, workshops, conferences, high-quality language courses, soft skills training)
- Support of your work-life balance – flexible work hours, work from home, extended vacations
- In-house tennis/ volleyball court, table tennis

- And more benefits such as a Multisport card, meal allowance, kindergarten operated by the ASCR
- More information is available at [Why FZU?](#)
- The salary will be discussed in detail during the interview

#### **Terms of employment**

- Start of employment: Oct 1, 2023 or later
- Part-time or full-time on an agreement
- 1-year contract with possible extension of up to 4 years

#### **Application procedure**

- Please send your applications to Mgr. Monika Svobodová: [monika.svobodova@fzu.cz](mailto:monika.svobodova@fzu.cz)
- For more information contact the supervisor Mgr. Helena Reichlová, Ph.D.: [reichlh@fzu.cz](mailto:reichlh@fzu.cz) - Head of Working Group

Information regarding the personal data processing and access to the personal data at the Institute of Physics of the Czech Academy of Sciences: <https://www.fzu.cz/en/about-fzu/official-noticeboard/processing-of-personal-data>