

PhD position (f/m/d): Accelerated design of sustainable hard magnetic alloys



ReferenceNo.: MCL_275

Materials Center Leoben Forschung GmbH (MCL) is a leading competence center in the field of materials research and technology. In this context, we support numerous companies in the production sector developing high-performance materials, manufacturing processes and products. By developing specific computer-aided technologies, we accelerate materials based innovation including the digitalization of the manufacturing chain as well as of products. Our portfolio includes cooperative research and development projects with international and national partners from the production and research sectors as well as several consulting, laboratory and simulation services in materials science.

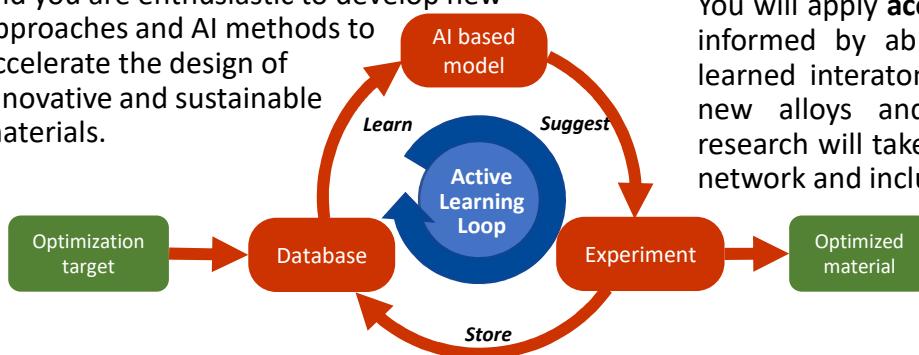
*Would you like to work in an innovative and international setting?
Then MCL is the perfect work place for you!*

Your Profile

You have or will shortly receive a master degree in any of the computational sciences (e.g., computational materials science/physics/chemistry, applied mathematics). The project requires knowledge in

- programming (e.g., python),
- atomistic simulation (e.g., DFT, LAMMPS),

and you are enthusiastic to develop new approaches and AI methods to accelerate the design of innovative and sustainable materials.



Tasks & Responsibilities

The aim of the project is to develop combined computational/experimental workflows for an **AI-supported design of sustainable hard magnets** free of rare earth elements. The activities focus on MnBi-based magnets with the goal to improve magnetic properties by means of optimized processing and doping/alloying. The project will be carried out in connection with national and international research and company partners.

You will apply **accelerated materials design loops** informed by ab initio modeling and machine-learned interatomic potentials to find promising new alloys and processing parameters. The research will take part in a collaborative scientific network and include **research stays abroad**.

Our offer:



- flexible working hours
- further training/education
- home office
- employee events
- cooperation with Firmenradl

A permanent employment contract with immediate start and a gross salary per year of € 52,862.74 (40h/week).

*Please send us your application and a detailed resume. We are looking forward to it!
We would like to especially encourage women to apply.*

bewerbung@mcl.at