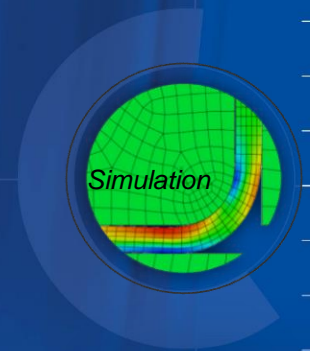


# PhD position: *Digital Material Design Guidelines for high strength hydrogen-resistant alloys*

Reference No.: MCL\_211

Materials Center Leoben (MCL) supports numerous companies in the production sector developing high-performance materials, manufacturing processes and products. MCL designs specific computer-aided technologies in order to accelerate innovation processes in manufacturing companies as well as to support the digitalization of the value chain and 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.

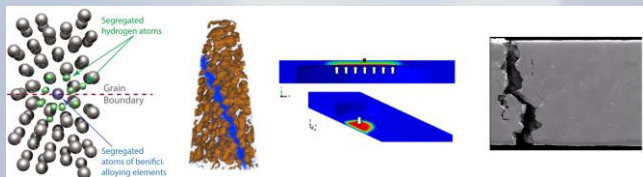


## Multiscale-model-based material design for hydrogen tanks

*These topics inspire you or you are already familiar with them?  
Then you are the right person for this position!*

### What are we looking for....

- Academic degree (master equivalent) preferably in materials science or physics
- Knowledge in programming languages (python, html, c++...)
- Interest in multi-disciplinary approaches for alloy development
- Scientific curiosity, team skills, self-initiative
- Good oral and written communication skills in English



### Your challenge...

- Development of digital Material Design Guidelines (MDG) precipitation hardened fcc alloys for hydrogen applications with resistance against hydrogen embrittlement
- Multiscale modelling of hydrogen-microstructure interaction (DFT, Calphad, FEM)
- MDG validation by comparison to hydrogen charging experiments
- Presentation of results at international conferences
- Writing of scientific articles for peer reviewed journals

### Our offer

An employment contract with start from June 1<sup>st</sup> 2022 and a gross monthly salary of € 3.058,45 (14 times per year) for 3 years.

*Please send your complete application documents by email.  
We are looking forward to knowing you!*

[bewerbung@mcl.at](mailto:bewerbung@mcl.at)