

## VACANCY FOR A PHD POSITION IN GERMANY (3 YEAR SCHOLARSHIP)

Topic: RESEARCH ON THE POSSIBILITIES OF IRON SILICATES AS CARBON SINK AND CONSTRUCTION MATERIALS

The global trend towards electromobility is increasing the demand for copper in the world. Copper production has several by-products such as iron silicates. Iron silicates fines are produced in huge quantities. This material can be used as carbon sink to reduce the CO<sub>2</sub> footprint as well as construction materials by carbonation. Within this work, the carbonization dynamics (reaction kinetics) as well as the properties of the carbonized materials inside construction materials will be studied.

### Your profile:

- MSc in materials science, technical chemistry or physics, geology, mineralogy or similar discipline
- Preferential competences in XRD, XRF, microstructure, ICP-OES/MS
- Creative work both independently and in a team
- Good language skills in English and/or German
- Scientific curiosity, hands-on mentality and ability for goal-oriented scientific work
- Willingness to travel internationally

### Your tasks:

- Close cooperation with companies
- Process engineering development of a carbonization process
- Process engineering development of a use in construction materials
- Analysis and evaluation of samples
- Development of concepts for the preparation process chain
- Regular writing of project progress reports
- Preparation and presentation of lectures and scientific publications

### Our offer:

- Work with experts from different fields and disciplines
- Fruitful and creative work atmosphere
- Wide range of laboratory equipment and analyses
- Opportunity to travel to international conferences
- 3-year scholarship
- Access to our industry network & partners

There is the possibility of doing the doctorate on this topic in cooperation with the Martin Luther University Halle-Wittenberg

**About the ITEL:**

The Institute for Technologies and Economics of Lithium (ITEL) I – Deutsches Lithiuminstitut GmbH aims to shape the interdisciplinary, CO<sub>2</sub>-neutral circular economy for lithium in Germany. The switch to electromobility will make Germany the central location for battery production in Europe and thus also for the production of the crucial precursor lithium hydroxide. The reduction and reutilisation of the by-products resulting from the refinement of lithium is the focus of the institute's work. Another focus is research into new production steps to optimise by-product value creation.

**Contact:**

Please send your full application including CV and detailed cover letter via e-mail (PDF in one file) to Dr. Andreas Neumann

ITEL – Deutsches Lithiuminstitut GmbH

Leipziger Straße 70

06108 Halle

E-mail: [andreas.neumann@lithiuminstitut.de](mailto:andreas.neumann@lithiuminstitut.de)

Tel: +49 345 806 83 14-6