

Materials Center Leoben Forschung GmbH (MCL) is an internationally active research institution specializing in materials research along the whole product value chain starting from the materials synthesis, proceeding with the processing of products and concluding with their in-service behavior until the end of the product life time. MCL is carrying out long-term research and development projects in cooperation with a total of some 150 industrial and scientific partners as well as laboratory, computational and advisory services.

Energy storage will be of greatest importance for the climate energy objectives as it has the potential to cover the entire energy value chain, including energy demand and supply, grid performance and market flexibility. The announced PhD thesis is embedded in this hot topic where the development and application of advanced methods like X-Ray computed tomography shall give novel possibilities regarding the characterization of silicon based lithium ion batteries.

To strengthen our team, we are looking for someone with the following area of responsibility or requirement profile:

PhD Thesis

Development of an Advanced Methodtoolbox for the Characterization of silicon based lithium-ion batteries

Reference-n°: MCL_73

Tasks:

- *Work within an interdisciplinary research environment directly connected to the industry.*
- *Develop and apply a method toolbox for the characterization of silicon based lithium ion batteries.*
- *Link the obtained experimental data to the simulations.*
- *Evaluate possibilities and limitations of the methods and give a conclusion regarding the best possible characterization approach.*

Requirements:

- *Education: graduate degree in experimental or theoretical physics, chemistry, material science, or similar*
- *Hard skills: basic programming skills e.g. Python or similar, Matlab; interest in experimental and theoretical work, interest in image processing*
- *Soft skills: Initiative, scientific curiosity, team-minded, structured working*

Additional information:

- *Supervisor: priv. Doz. Dr. Roland Brunner*
- *Gross monthly salary: € 2.696,44*
- *Start of work: as soon as possible*
- *Duration: 36 months*
- *Leoben*
- *employment*

Please send your complete application documents by post or email to:

Materials Center Leoben Forschung GmbH
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