Battery4Life is a newly founded research company at Graz University of Technology and, as a COMET Center, cooperates with industry and academia in the field of battery technology innovation. The goal is to make batteries more efficient and sustainable. Safe operation is a clear focus to achieve the longest possible service life, both in the vehicle and through subsequent use.

We are looking for a motivated researcher to join our team and advance the understanding of lithium-ion battery ageing. The role focuses on investigating degradation mechanisms and developing physics-based models to predict battery ageing and lifetime, supporting extended use in both automotive and second-life applications.

Researcher / PhD Candidate

Battery Degradation

(m/f/x)

Full-time (38.5 hours per week), Graz (on campus of Graz University of Technology)

Job profile

- Drive scientific advancements in battery safety, ageing mechanisms, and diagnostics.
- Develop, implement, and validate physics-based degradation models (e.g. SEI growth, lithium plating, active material loss) based on the Pseudo-Two-Dimensional (P2D) model.
- Develop simulation workflows for parameter estimation and sensitivity analysis.
- Collaborate with industrial and academic partners with experts in battery safety, manufacturing, automation and sustainability assessment.
- Publish research findings in scientific journals and present results at international conferences.

Required qualifications

- Master's degree in physics, chemistry, electrical/process/mechanical engineering or a related field.
- Basic knowledge of battery modeling, diagnostics, or equivalent electrical circuits of batteries.
- Experience in data acquisition, processing, and modeling (e.g., PyBaMM, Python, MATLAB, or similar).
- Strong analytical and problem-solving skills with an interest in scientific research.
- Excellent written and spoken English. German knowledge is an advantage, willingness to learn is expected.

Desired qualifications

- Strong analytical and structured scientific thinking.
- Ability to work independently and in interdisciplinary teams.
- Motivation to publish high-quality research.
- Curiosity, initiative, and commitment to advancing battery safety and battery degradation models.
- Interest in predictive modeling and scalable battery system analysis.

We offer

- Exciting research opportunities in battery safety, diagnostics, and ageing modeling.
- Mentorship and support for pursuing a parallel PhD.
- Opportunities for publications, conference presentations, and international networking.
- Flexible working arrangements and a collaborative, interdisciplinary environment.
- Participation in innovative projects with industrial and scientific partners.
- Full-time gross salary for this position is 4,148 Euro per month (14 times a year)

Gender Balance and Diversity are important to us – they enrich our research.

We look forward to receiving your meaningful and complete application (cover letter including motivation, CV, and references) by email to jobs@battery4life.at, reference: **ResearcherBatteryDegradation.**

[Optimized Safety and Increased Sustainability of Batteries]

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