

Open PhD position (m / f / d) in the field of Surface functionalization of carbon materials

As part of the European Project VanillaFlow, a doctoral (PhD) position at the University of Leoben, Austria, Institute for Chemistry of Polymeric Materials, is advertised.

The VanillaFlow project deals with the development of environmentally friendly organic redox flow batteries as scalable energy storage systems. The goal of VanillaFlow are sustainable and scalable solutions for redox flow batteries. These solutions are based on raw materials that are widespread in the EU, and use sustainable processes that are fundamentally safe to use. Within the PhD thesis, an optimal performance of redox flow batteries is to be achieved through intelligent surface functionalization of carbon felts as electrode materials. Suitable methods for the targeted adjustment of the surface properties of carbon felts are being developed, and their influence on the performance of redox flow batteries is being investigated.

Facts about the PhD position:

- Topic: Surface modification and functionalization of carbon
- Where: University of Leoben, Institute of Chemistry of Polymeric Materials
- Time: 36 months, start in autumn of 2023
- Employment: 40 hours per week
- Monthly gross salary: € 3.277,30 (14x per year)

Our requirements of you:

- Completed degree in chemistry, technical chemistry, or a related field of study
- Interest in the field of surface functionalization and analysis of surfaces
- Structured and independent work style (after a detailed training phase)
- Willingness to write articles for scientific journals and to prepare a dissertation
- Initiative and ability to work in a team

Your tasks:

- Experimental implementation of the functionalization of carbon materials
- Operation of a plasma system, execution of wet chemical reactions on a lab scale
- Characterization of carbon surfaces with XPS, electron microscopy, contact angle testing, etc.
- Precise documentation of the experiments, evaluation of the results
- Giving presentations and writing articles for high-quality journals



Department Kunststofftechnik

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What we offer:

- Participation in a European Project related to sustainability
- State-of-the-art equipment
- Expert support from our team
- Pleasant and friendly working atmosphere
- 40-hour week with full salary, possibility to write a PhD thesis

The position is open from September / October 2023 on, If you are interested, please contact:

Prof. Dr. Wolfgang Kern

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<https://www.kunststofftechnik.at/en/department/chairs/chair-of-chemistry-of-polymeric-materials>