

PhD Student Research Group Freunberger: Metal-sulphur electrochemistry

- Klosterneuburg (Vienna), Austria
- Fully-funded PhD with internationally competitive salaries ([details](#))

The group of Stefan Freunberger ([group website](#)) is looking for an outstanding PhD student interested working on a frontier topic of sulphur redox chemistry at the Institute of Science and Technology Austria. Exploiting sulphur redox chemistry in batteries may enable a step change in energy storage but reaction mechanisms are poorly known, causing poor capacity, rate capability and cycle life. We have previously used combined diffractive and spectroscopic methods to elucidate important reaction steps ([link](#)). The aim of the post is to close critical knowledge gaps in metal-S electrochemistry with both solid-state conversion and with liquid electrolytes.

We shall use operando TEM, SAXS/WAXS and spectroscopies together with sophisticated data analysis as key tools, complemented by a suite of in/ex-situ methods and synthesis. To gain a deeper understanding, we will collaborate with groups specialized in quantum chemical calculations and data science.

Your profile

- BSc or MSc in Chemistry, Materials Science, or Chemical Engineering or related field
- Commitment to research excellence with experience according to career stage
- Knowledge in physical chemistry, electrochemistry, and spectroscopic, diffractive, and microscopic techniques
- Knowledge in inorganic and organic syntheses under inert conditions
- Interest in battery electrochemistry
- Interest in machine learning and quantum chemical methods

Application documents: Please send a single pdf document containing your cover letter, CV, publication list, and contact information of 2 to 3 references.

To submit your application please email: stefan.freunberger@ist.ac.at. Please use the position name above as your subject line.

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