The Physical Chemistry Institute (Prof. Dr. Jürgen Janek), Faculty of Biology and Chemistry invites applications for a PhD position

The position is available as of now until 31st March 2022 and is funded by the DFG („Deutsche Forschungsgemeinschaft“) within the cluster of excellence „Energy Storage beyond Lithium“. In agreement with the current regulations the position is on the TV-H E13 scale (67 %) for public employees.

Your responsibilities: As part of the subproject, novel solid electrolytes for "All Solid State Batteries" (ASSB) will be investigated. In detail, the following aspects are to be worked on:

- Electrochemical investigation of novel ion-conducting solid electrolytes (multivalent ions, e. g. Mg): Determination of the ionic and electronic partial conductivities by means of electrochemical impedance spectroscopy (EIS) as well as tracer diffusion measurements by time-of-flight secondary ion mass spectroscopy (ToF-SIMS); comparison with alkali ion conductors.
- Electrochemical characterization of novel chloride ion-conducting solid electrolytes: Conductivity measurements, determination of the ionic and electronic partial conductivities, tracer diffusion measurements, investigation of the temperature dependence of the transport properties.
- Publication of the results in peer-reviewed journals.

Our selection criteria:

- Have a MSc or Diploma in chemistry or materials science, preferably solid state chemistry or solid state electrochemistry;
- Have very good knowledge in the field of electrochemical characterization of ion-conducting solids by means of various methods (e. g. EIS, XPS, ToF-SIMS) as well as the construction and characterization of battery cells (e. g. cell cycling) and practical experience with working under an inert gas atmosphere (e. g. in glove boxes);
- Have good proficiency in English and the willingness to travel (also abroad);
- Intensive scientific exchange with the scientists from the project cluster as well as from the industry is necessary;
- Have very good communication skills and an interdisciplinary, open mindset.

The Justus-Liebig University Giessen strongly encourages female scientists to apply for this position. As a family-friendly higher education institution, the Justus-Liebig University Giessen particularly welcomes applicants with children.

Please send your application (no e-mail) stating the applications number 279/08 with the usual documents until March 26th 2019 to Prof. Dr. Jürgen Janek, Institute of Physical Chemistry, Heinrich-Buff-Ring 17, 35392 Giessen. Applicants with disabilities but otherwise equal qualifications will be preferred. Please do not send original documents as these will not be returned after end of the selection procedure.