

**POSITION: (Senior) Cell design, Simulation & Modelling Engineer**

**LOCATION: Frankfurt, Germany**

**ABOUT SVOLT:**

SVOLT is a Greentech company committed to reduce global carbon footprint by being an enabler to the automotive industry. Our goal is to provide access to affordable electrical mobility across all countries and markets. We supply lithium-ion battery technology and battery system solutions to automotive clients with significant impact on electrical vehicle driving distance, vehicle safety and system lifetime that goes beyond conventional combustion propulsion. We have successfully cultivated a start-up DNA while growing our global business beyond 200GWh of battery production capacity. In Europe SVOLT will install a Gigafactory and a Module and Battery Pack plant in Saarland, Germany with 30 GWh capacity

**ABOUT THE POSITION:**

The current role is based out from SVOLT, Europe and successful candidate will join Cell Engineering Department of European R&D Center. The Cell design, Simulation & Modelling Engineer is a member of the European Cell Engineering team. The job holder will be responsible for the thermal and electrochemical modelling of SVOLT Li-ion cells as well as having input in cell design. He/she will also have the responsibility to develop advanced performance, lifetime, and algorithm modelling and contribute to new cell design concept

**RESPONSIBILITIES**

- Develop Multiphysics based, and data driven based models of SVOLT lithium-ion batteries
- Develop robust battery models to predict cell behaviour including but not necessarily limited to rate performance, life degradation, calendar aging, electrochemical and thermal response, and safety related behaviour
- Collaborate with the testing team to formulate and execute designs of experiments (DOE) to acquire sufficient data to train, validate, and test the battery models
- Work on battery estimation algorithms and models regarding SOC, SOH, impedance, and performance limitation under given operating conditions
- Work with cross-functional teams to develop, implement, test, and maintain your model
- Develop advanced deep learning models and tools for data analysis and optimization
- Participate in design of prismatic and large cylindrical Li-ion battery cells for automotive applications
- Select correct chemistry and associated design depending on customer requirement
- Work with HQ to develop innovative cell chemistry
- Write test plan, propose design of experiment and communicate with testing team
- Participate in customers meeting to provide support to EU sales team
- Participate to cell DFMEA activities

**QUALIFICATIONS & REQUIREMENTS**

- Bachelor, Master degree or PhD in Mechanical engineering, Electrochemistry or related discipline
- Experienced in using COMSOL, Matlab, numerical simulation software or other Multiphysics-based solutions for battery simulation
- Competence in developing data driven based models for battery simulation
- Excellent understanding of Li-ion battery technology and chemistry
- Experienced in creating Multiphysics-based and data driven based models for electrochemical, thermal and/or mechanical systems
- Skills in writing code to process and analyse large data set

**SVOLT Energy Technology (Europe) GmbH** - De-Saint-Exupéry-Straße 10- 60549 Frankfurt am Main

- Ideally experience in thermal and electrochemical cell modelling
- Ideally familiar with battery testing
- Previous experience in cell design in a strong plus
- Strong ability to plan, prioritize and communicate on cell design activities
- Strong knowledge of Li-ion battery safety
- Fluency in English
- German and/or Chinese are considered as an additional advantage

#### **PERSONAL CAPABILITY**

- Relationship Building and Collaboration
- Actively seeks to build and maintain trusting relationships with a wide network of relevant people within SVOLT as well as with the customers
- Professional communication skills, both verbal and written
- Motivation to take decisions/ Executing for results
- Demonstrate tenacity, persistence, and inner strengths in tackling difficulties, is resilient and optimistic
- Take personal responsibility and hold others accountable for agreed-to results
- Consistently takes the initiative and ownership to drive outcomes
- Adaptability to change with a focus on the future

Please visit <https://svolt.jobs.personio.de/> to see all vacancies at SVOLT Energy Technology (Europe) GmbH.