

Company Description

No matter which country you're in, the transition from an economy based on fossil fuels to one based on sustainable energy sources is well underway. It takes slightly different approaches, and it progresses from different starting points depending on the area, but it's clear, we're all engaged in a global shared "electrification" challenge. At BASQUEVOLT our mission is to develop sustainably the best battery materials and cells that will make possible the mass deployment of electric transportation, stationary energy storage and advanced portable devices. Our proprietary solid-state battery technology will allow us to develop and commercialise safe, high performance and affordable products for a diverse portfolio of customers, from mobility, stationary energy storage and consumer electronics. To this end, we offer the position of Cell Failure Analysis Engineer.

Information

 Deadline: 2023-01-13
 Category: Business
 Province: Araba / Álava

 Country: Basque Country
 City: Vitoria-Gasteiz

Company

BASQUEVOLT



Main functions, requisites & benefits

Main functions

The Cell Failure Analysis Engineer successful candidate will join Basquevolt's Cell Engineering team and will be responsible for the failure analysis and characterization of Basquevolt's cells. Reporting to the R&D Director, s/he will be responsible for: Characterizing cell degradation and failure modes through electrochemical, spectro-electrochemical, and physical characterization techniques (non-destructive and destructive test methods). Identifying root causes and propose solutions to mitigate the risk and ensuring maximum cell performance and lifetime from both design and usage. Developing new test techniques to develop understanding of cell degradation and failure modes associated with semi solid-state and full solid-state batteries developed by Basquevolt. Organizing and carrying out characterization and battery failure analysis work to support Basquevolt's R&D and production departments. Designing new cell format/configuration to characterize cell, electrode, and material such as 3-electrode cells. Developing new methods and tools to identify degradation mechanisms and lifetime prediction for Basquevolt's semi solid-state and solid-state batteries. Preparing and maintaining procedures, validating methods and equipment, developing and implementing failure analysis protocols and failure replication testing. Preparing concise report and effectively present to internal and external teams. Participating actively in customer related meetings, acting as a technical contact point. Pursuing intellectual property development to secure Basquevolt's competitive position. The Cell Failure Analysis Engineer is expected to work as a team member with other parts of the company and maintain in-depth relations with all members of the Engineering team.

Requisites

We are looking for a highly skilled and motivated individual capable of taking up this challenging opportunity to develop an ambitious project. Applicants should have a high degree of initiative, flexibility and should be open to intense interdisciplinary collaboration, first in an early-stage start-up but moving progressively to an efficient mid-size organisation. Specifically, we will assess expertise in the following aspects: MSc, PhD in electrochemistry, chemical engineering, or materials science, in particular in the field of lithium batteries and related electrochemical systems. >2 years of industrial experience in lithium-ion battery cell failure analysis. Strong understanding of lithium-ion battery principle of operation and failure modes. Hands on experience in electrochemical techniques: EIS, GITT, CV, PITT, 3-electrode cell measurements. Hands on experience in material characterization: XRD, SEM, TEM, FTIR, GCMS, XPS. Strong understanding about the principle of dQ/dV and dV/dQ profiles, and their application in degradation and failure mode identification. Strong understanding about lithium-ion cell's components and their interactions inside the cell. Deep experience building and tearing down lab-scale format (~0.1 Ah), sample size format (~1 Ah), and large format (> 30 Ah) lithium-ion cells. Understanding of applicable test equipment, test procedures, international standards and certified agency requirements applicable to rechargeable lithium-ion battery cells. Fast information analysis with good problem-solving skills. Excellent communicator to all levels of management in the company. We expect high readiness to work with strong engagement and creativity in an interdisciplinary and international environment. Applicants should be fluent in English. Spanish and any other European languages will be a plus.