Senior Battery Design Engineer

The Company

Sionic Energy is an innovative, energy storage technology company with more than 10 years developing breakthrough products for the Li-ion battery markets. Utilizing innovative materials and cell designs, the Company has recently developed a revolutionary low cost, high-capacity silicon anodes that finally enables high-capacity silicon batteries to enter mainstream markets. Delivering a very disruptive performance jump in energy density, at lower cost, with increased safety for E-mobility, consumer electronics, and aviation markets, the Company is well positioned to rapidly commercialize this technology with seamless integration into the existing Li-ion manufacturing eco-system.

The Company is supported by top-tier venture capital firms and strategic investors that, alongside its previous product partnerships with leading automotive, mobile device, battery, and battery companies, provides the foundation for rapid growth.

The Position

Reporting into the VP of Product Development, the Senior Battery Design Engineer plays a critical role in refining the cell designs for Sionic's silicon anode & electrolyte innovations in next generation Li-ion battery cell platforms. You'll work closely with the R & D team to optimize and adapt the technology to various cell formats, duty cycles, and requirements of customer targets and the associated manufacturing. The focus will include validation and design optimization with materials selection, electrode designs, and associated components for complete high performance balanced cell design.

This position and its efforts towards designing, executing, and implementing in-depth data analysis of E-chem experiments will have a strategic impact on the commercial rollout of Sionic's silicon battery designs. The position is a rare opportunity to be at the forefront growing a startup into a flourishing business.

Key Responsibilities

- Conduct materials, formulation, and design evaluations for new product versions or new generations of products, including active materials, additives, separator, and electrolytes
- Execute electrode & cell design optimizations to achieve customer/market requirements on performance, safety, reliability, and cost
- Run well-designed experiments based on DOE and Taguchi methodologies
- Test cells, analyze and summarize performance data, and use various electrochemical and materials analysis techniques to determine degradation mechanisms
- Perform FMEA and root cause analysis when necessary to achieve design and product goals
- Develop and validate component and assembly level specifications of electrochemical component materials and assemblies
- Work closely with R&D and manufacturing engineering to develop and document electrode and cell pilot processes, and support their transfer to production

Qualifications

- At least 5 years + of experience in Li ion battery design, development and optimization including knowledge of balancing key materials, electrodes and components for optimal performance.
- Knowledge of the fundamentals of cell lithium-ion battery materials, components, performance, impedance, cell testing/data analysis, and failure modes.
- Bachelor's degree in Materials Science, Chemical Engineering, Mechanical Engineering, or related field (Master's or Ph.D. preferred)

- Familiarity with DOE, FMEA and Taguchi methodologies preferred
- Strong problem-solving skills, with the ability to combine theory with empirical observation
- Ability to interact effectively with suppliers, partners, vendors, and colleagues
- Self-motivated, persistent, hands-on, and results-oriented
- Strong written and oral communication
- Ability to multi-task and work in a fast-paced environment
- High degree of professionalism and maturity with good judgment

Location: Rochester, NY in the Company's 13,000 sf facility

Equal Employment Opportunity: Sionic Energy is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age, or protected veteran status. In compliance with federal law, all persons hired will be required to verify identity and eligibility to work in the United States and to complete the required employment eligibility verification document form upon hire.