Senior Battery Process Engineer – Slurry Mixing and Coating

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.

Position Summary

Reporting to the VP of Manufacturing, Sionic Energy is seeking a Senior Battery Process Engineer to assist our Product Development group in the development of electrodes for advanced lithium-ion batteries. This position involves designing innovative slurry and coating strategies using a breadth of scientific knowledge and coating techniques. A qualified candidate needs to demonstrate comprehensive understanding of slurry formulation, mixing protocol, and coating processes, coupled with strong collaborative problem-solving and communication skills. The position requires working in a cross-functional team environment to ensure the successful integration of the company's unique materials into lithium-ion-battery systems.

Responsibilities and Duties

- Design innovative slurries with various active materials, additives, and binders for battery electrodes and other coatings
- Systematically improve upon existing formulations through thoughtful experimentation to generate knowledge about and optimize the performance of slurries and coatings
- Understand and document lab-scale processing and work with the team to characterize materials and evaluate failure mechanisms; document the findings in reports
- Effectively communicate ideas and results internally across multiple teams
- Develop or improve slurry and coating characterization techniques to determine formulation-performance relationships and offer chemical and cell level corrective strategies.
- Engage and collaborate with cross-functional teams, including materials science, mechanical engineering, and system engineering.
- Manage the development and production roadmaps for the mixing and coating development cycle
- Collaborate with R&D team to develop and implement a predictive method for understanding material processing vs cell performance relationships.
- Adapt Lean Six Sigma, SPC and other methods to fit process need driving stability and overall systematic process improvements
- Understand the practical use of statistical tools and data analysis/reporting software
- Assess safety and environmental impact of equipment and processes
- Ensure all aspects of an operation or process meet specified regulations
- Develop or optimize processes in order to meet product specifications
- Prepare and maintain documentation, such as process flow diagram, work instructions, SOPs, etc.
- Be able to operate, clean, and maintain all work-related process equipment and instrumentation

Education and Experience

- Bachelor's degree in engineering or physical sciences is required (chemistry, chemical engineering, materials sciences, or physics preferred).
- 5+ years of industry experience with lithium-ion batteries
- Highly experienced in common electrode coating techniques including slot-die, and Comma-blade roll-to-roll coating.
- Understanding of electrochemical processes in Lithium-ion batteries and familiarity with existing battery design and manufacturing processes.
- Experience and success in product development from concept, design, prototype to production are required.
- Hands-on experience with instrument maintenance and troubleshooting. Demonstrated ability to work effectively on teams
- in-depth knowledge of various battery chemistries (e.g. traditional Lithium-ion, Silicon anode) is a great plus.

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.