



ELECTROCHEMIST ENGINEER POSITION

Aclarity is a venture capital backed water technology company that designs and deploys proprietary electrochemical water treatment products to destroy harmful contaminants and protect the environment and human health. Our goal is to be the most impactful water company by delivering sustainable, cost effective, and superior water treatment solutions to the world. We are a dynamic and growing startup that values inclusiveness, hard work, and fun.

At present, Aclarity is heavily involved with research identifying optimal treatment conditions for a number of organic and inorganic compounds including (but not limited to) poly- and perfluorinated alkyl substances (PFAS), ammonia, cyanide, and nitrate. We are examining these in several different water matrices including landfill leachate, industrial wastewaters, and potable water sources.

Aclarity has deployed numerous pilots and started up their first multi-reactor customer install in December 2021. We have begun expanding our product line from single anode-cathode pairs operating in batch mode to larger systems containing multiple electrode pairs and operating in different flow modes including single-pass and internal recirculation. We are also exploring different electrode material and configurations to optimize treatment of different contaminants.

Position Summary: The Electrochemist Engineer is responsible for building and maintaining the electrochemistry R&D infrastructure to support the product development and optimize process control and performance. Works closely with external manufacturers, vendors, and other team leaders to evaluate and provide performance data on materials and processes. The Electrochemist Engineer will participate in a cross functional team environment with mutual collaboration to assure success of the final product.

As a highly motivated individual with very good organization, technical, and communication skills, you will work with a team of professionals to deliver superior service. The “ideal” candidate will come from an engineering background and bring with them project management and technical expertise that can be built in as learning more about the company’s core business.

Examples of Duties:

- Build and maintain electrochemistry R&D infrastructure.
- Perform comprehensive modeling of electrochemical systems, optimization and sensitivity analysis, charge-rate/capacity and electron transfer optimization.
- Develop test protocols, evaluate and implement those test protocols to the manufactured products to develop QA/QC standards.
- Oversee experimental preparation, equipment maintenance, quality control, analysis of samples; determine appropriate analytical methods for different parameters and experimental matrices.
- Direct the design and implementation of research protocols; design safety procedures; adapt new procedures, methods, or instrumentation relative to research procedures, and search of pertinent scientific literature as needed.
- Establish and verify laboratory performance indicators and ensure the integrity of the data presented to management.
- Supervises the analysis of treatment chemicals and other purchased substances to ensure that specifications are met.
- Review data prior to reporting. Update quality control charts and graphs on a regular basis.
- Proactively manage safety and environmental issues and ensures compliance with Federal and State standards including Hazardous Waste Disposal and Air Quality Standards in lab and in field testing assignments.
- Analyze charge transfer, chemical reactions and mechanisms, flow patterns, current and potential distribution, mass/momentum transport.
- Simulation of different operational conditions (charge-rate, fluid(s) composition, temperature, pressure) using developed models.

- Guide design and fabrication of electrochemical/chemical/mechanical systems
- Assist in the development of experimental protocols for testing of electrochemical systems – study of cycle life and calendar life of electrodes and systems; multi-step models to study degradation processes; design of custom-made testing equipment
- Conduct data analysis for performance optimization – prototype to final product translation
- Provide overall engineering support and input to external manufacturers
- Participate in regular project team meetings across multiple projects
- Prepare scientific publications and present work at conferences.

Supervision:

Perform various duties of a routine to complex nature following acceptable standards of quality and performance, requires independent judgment in determining methods of completion and carrying out assignments

Supervision received: Works under the direct supervision of the R&D Manager or their designee.

Supervision Given: Provides direction and guidance to the other staff and external partners, assisting them in completing their assigned work.

Education, Training, and Experience:

Chemical, Mechanical, or Electrical engineer or Chemist with Masters in focusing in electrochemistry or related is required. Ph.D in electrochemistry is preferred. Knowledge and experience on charge, heat, and fluid transport as well as electrode and reactor design and manufacturing is highly desirable. 2+ years of working experience in analytical chemistry is also preferred. Environmental engineering and/or programming experience is a plus. Must possess independent problem-solving skills and ability to perform experimental work. We seek candidates with excellent communication skills, ability to multitask projects and collaborate effectively with other team members.

Physical Requirements:

Regularly required to walk, stand, sit, talk, and hear; operate objects, tools, or controls; pick up paper, files and other common office objects. Ability to view computer screens and work with details for extended periods of time. Work to be performed in a lab environment, therefore proper safety protocols must be followed.

Location:

This position is located in Worcester, MA. Applicant must be local or be willing to relocate.

To Apply:

Please send cover letter, resume, and list of references to info@aclaritywater.com for consideration to this position. This application will remain open until filled. For more information about the company visit us at www.aclaritywater.com

Aclarity, Inc. is an equal opportunity employer and gives consideration for employment to qualified applicants without regard to race, color, religion, creed, national origin or ancestry, ethnicity, sex (including pregnancy), gender identity or expression, sexual orientation, age, physical or mental disability, citizenship, past, current, or prospective service in the uniformed services, genetic information, or any other characteristic protected under applicable federal, state, or local law.