



March, 2020

Only three rechargeable battery chemistries have been commoditized in the past two centuries. Natron Energy has delivered the fourth. Natron's products enable solutions for next-gen power services in multi-\$Billion markets including data centers, EV fast charging, materials handling, and renewables support. Natron's batteries offer breakthrough performance in three metrics critical to these markets: ultra high power capability including full discharge and recharge in minutes, an unmatched service life of tens of thousands of deep discharge cycles, and unique safety and fault tolerance including no thermal runaways. Natron's batteries are based on a new cell chemistry that includes Prussian blue electrodes and a sodium-ion electrolyte. Natron manufactures its products in existing lithium-ion plants. Natron launched its first product for data center customers in Q4 2019.

Natron seeks a Senior Scientist with 5+ years of experience in battery cell development to lead and execute projects related to cell design including electrolyte formulation, electrode materials development (actives, carbons, binders), and characterization and interpretation of cell degradation mechanisms. The person hired into position will join a passionate, diverse team and collaborate with experts in chemistry, materials engineering, and cell design to develop Natron's next-generation cell technologies. Qualified candidates have prior experience in understanding multifaceted failure/degradation mechanisms in current/future generation Li-ion cells. This position requires both extensive hands-on laboratory work the ability to apply a deep fundamental knowledge of electrochemical systems including the chemistry and electrochemistry of water, inorganics, and small molecule organics. The person for this position is a hard-working, team-work oriented, creative, and self-motivated scientist who has no fear of pushing the boundaries of their intellectual capabilities. He or she must hold a Doctorate degree in electrochemistry, chemistry, applied physics, or a related field.

#### Responsibilities:

- Lead and execute projects to develop new electrolyte formulations, composite electrodes, and passive components development.
- Perform electrochemical and analytical characterization of new materials (electrolytes and electrodes) and devices containing them, including performance and abuse testing.
- Work with product engineering staff to translate top-down product design requirements into bottom-up materials/chemistry selection and cell designs.
- Identify, source, test, and develop new cell materials and components.
- Present written and verbal progress reports to other technical staff and company leadership.

#### Experience and Skills:

- Required: PhD in electrochemistry, chemistry, applied physics, or a related field.
- Required: 5+ years of relevant, hands on R&D experience (in a combination of academic, industrial and/or National Lab settings) developing innovative materials and/or chemistry for electrochemical systems such as Li-ion cells.
- A strong track record for personally leading and executing successful R&D projects by making the scientific discoveries/breakthroughs needed to make the project successful.
- Deep fundamental understanding of the chemistry and electrochemistry of a modern Li-ion cell, including selection criteria for current/future generation electrolyte additives.
- Prior experience formulating battery electrolytes to manage intra-cell balancing, corrosion and passivation, and other (electro)chemical mechanisms.
- Broad knowledge inorganic chemistry including organometallics.

- Preferred: knowledge and experience of polymer binders, including relationships between structure/composition and chemical/physical properties such as slurry rheology, adhesion/cohesion, etc.
- Expert proficiency in physical characterization methods (and data analysis thereof) including SEM/EDX, XRD, ICP, FTIR, etc.
- Expert proficiency in non-destructive electrochemical tests including EIS, differential coulometry, intermittent titrations, etc.

Logistics:

- This is a full time, permanent position.
- Employees must work on site in Santa Clara.
- Compensation is competitive with other Bay Area senior scientist positions.

To Apply:

- Applications for this position require a completed response to a challenge question that can be accessed at <https://natron.energy/careers/>
- Please submit your resume and your response to this challenge question to: [jobs@natron.energy](mailto:jobs@natron.energy)