NTH CYCLE

Electrochemist

Who we are.

Demand for critical minerals to power the energy transition is growing exponentially. Yet, we know mining deeper and broader, and building landfills higher and wider, works against our fight to save the planet. At Nth Cycle, we see the path forward. We believe all the critical minerals needed for the energy transition are already in circulation today. We just didn't have a clean, profitable way of retrieving them, until now.

Nth Cycle is a metal processing technology company. Our electro-extraction technology helps battery recyclers and miners capture more critical minerals—for use in lithium ion battery manufacturing, among other things—while dramatically reducing costs and emissions. We are the heart of metals processing; we are the crucial step that profitably separates critical minerals from other elements, transforming them into production-grade feedstocks for the energy transition.

We recently closed a $12.5M Series A funding, won second place at TechCrunch Disrupt, and just moved into a new 1,200 sqft facility outside Boston.

Our Culture.

You won't find another team like ours. We believe in open, honest communication, and enjoying our work while changing the world. We work quickly but with intention—we've scaled our technology in size 100x in the past year. We're mission-oriented and think big—we're focused on reducing *gigatons* CO2 emissions from the atmosphere by 2050. And we value the perspectives and opinions of our colleagues while pushing each other to excel.

We're a dynamic team looking for a new team member who's also passionate about addressing climate change and advancing the clean energy industry. Consistent with our commitment to diversity & inclusion, we value colleagues with the ability to work on diverse teams and with a diverse range of people.

Position description.

Nth Cycle has an immediate need for an Electrochemist to join and lead the technological innovation of our electro-extraction solution in the mining, metals, and recycling industries. As Nth Cycle continues its rapid development, the company is looking for a high energy, self-starter to support the technological delivery of Nth Cycle's best in class solution. This role requires a confident and innovative professional, a good listener, aggressive in discovering novel electrochemical solutions to classical redox problems, and able to work well on a team within a rapidly growing business. Proven success in developing quantitative experimental and theoretical solutions to complex electrochemical problems and optimizing electro-extraction operating conditions will be the key to generating the novel techniques needed to achieve Nth Cycle's unique metals and material upgrade goals. We are looking for a sharp, hungry individual who is committed to truly redefining the way we refine critical minerals for the energy transition.

NTH CYCLE

This role will report to the VP Engineering Organization. They will work with the research, development, and engineering teams to deliver electrochemical solutions in areas such as: experimental and theoretical development of electrochemical filtration methods for selective dissolution/precipitation processes for complex metal solutions, investigation of novel flow-through electrode materials, and development of in-situ methods for electrode and process performance characterization. This role will mostly be hands-on laboratory efforts, but success will likely require interfacing virtually and in-person with customers and partners.

Key responsibilities and accountabilities.

- Creating and maintaining an active electroextraction database to compile methods and build knowledge base
- Develop flow-potential configurations for selective dissolution/precipitation of individual metals
- Design appropriate electrode specifications for specific flow-potential configuration and target metal(s)
- Collaborate with technical team to design and scale electroextraction configurations for improved performance
- Develop electrochemical methods for in-situ characterization of electrode and process performance
- Communicate technical results and challenges across the organization to advance product development
- Preparing and presenting electroextraction flow sheets with appropriate mass-electron-flow balances
- Develop reactive transport models to theoretically predict electroextraction performance
- Investigation of novel methods for in-situ electrode fouling mitigation and regeneration
-

Qualifications and experience.

Qualified candidates will possess a strong combination of the following:

- PhD, Masters or Bachelors in an Electrochemistry related field with an experimental focus or similar relevant experience.
- 3-5 Years relevant electrochemistry related hands on experience.
- Ability to work hands-on in lab individually and as a team.
- Significant experience with electrochemical methods such as CV, LSV, EIS, OCPT, and with aptitude in aqueous & solid metal analyses such as AA, ICP-MS, UV-vis, XRD, XRF, XPS, EDS, and SEM.
- Extensive experience with Microsoft Excel and other spreadsheet and modeling tools such as Matlab, Python, or Comsol for quantitative data analysis and electrochemical simulations.
- Strong written and oral communication skills.
- Ability, enthusiasm, and flexibility to perform in a fast-paced environment.
- Thorough technical understanding of electrochemical methods, thermodynamics, kinetics, and mechanisms, with understanding of metal dissolution-precipitation equilibrium, kinetics, and mechanisms.

Closing Statement.

Consistent with our commitment to diversity & inclusion, we value people with the ability to work on diverse teams and with a diverse range of people. We especially encourage members of traditionally underrepresented communities to apply, including women, people of color, LGBTQ people, veterans, and people with disabilities.

We know the right candidate might not check every box in this job description. You could also have important skills we haven't thought of. If you think you're a great candidate for this role, apply and tell us why. To apply, send us a resume and a few sentences about why you are interested in this position and what you bring to the table. We're looking forward to hearing from you.

Come help us build a billion dollar company and redefine the critical minerals supply chain.

Apply Today!

Please send your resume and cover letter to careers@nthcycle.com