



Microfluidics Engineer

at REEgen in Ithaca, NY

Overview:

REEgen is an Ithaca-based startup revolutionizing the sustainable production of rare earth elements (REE) using synthetic biology. REE are vital components in electronics and renewable energy infrastructure. Traditional REE production methods generate hazardous waste and emissions. At REEgen, we're pioneering clean, biological systems to extract, recover, and purify REE from diverse sources, minimizing environmental impact and securing a sustainable energy future.

Position Summary:

We are seeking a highly skilled and experienced Senior Biological or Chemical Engineer to join our dynamic research and development team. The ideal candidate will have a strong background in microfluidics and optics and in a subset of the following: chromatography columns, microbiology, polymer chemistry, and/or general biological or chemical engineering.

Key Responsibilities:

- Design, fabricate, and operate microfluidic droplet creation and droplet sorting devices.
- Design and test methods for encapsulating bacteria in chromatography columns.
- Analyze experimental data using statistical methods and bioinformatics tools to evaluate the performance and optimize the use of chromatography columns for REE separations and the microfluidic device for selecting bacteria.
- Design and execute flowsheets for creating an automated system of multiple chromatography columns to purify REE.
- Manage multiple projects simultaneously, including setting timelines, allocating resources, and coordinating cross-functional teams to ensure timely delivery of project milestones.
- Collaborate with a team of scientists to integrate synthetic biology solutions and communicate research findings and project updates effectively to colleagues.
- Identify and evaluate new technologies, methodologies, and tools for potential integration into our research and development pipeline.

Required Qualifications:

- Minimum of 5 years of hands-on experience in engineering research.
- Expertise in high-throughput screening, particularly using microfluidic droplets, and the design, creation, and operation of these screening methods.
- Experience building optical systems



- Strong analytical and problem-solving skills, with the ability to troubleshoot experimental challenges and optimize protocols.
- Excellent communication and interpersonal skills, with the ability to work effectively in a collaborative team environment.

Recommended Qualifications:

- Experience with molecular biology techniques.
- Experience in designing and operating chromatography columns.
- Proven track record of independent research.
- Experience with project management software and tools for tracking progress, managing resources, and prioritizing tasks.

Salary: Competitive, commensurate with experience. Base salary range: \$85k-\$115k.

Start date: November 1, 2024, or sooner.

How to Apply:

Please send a cover letter email with CV attached to sean@reegen.tech with "REEgen Microfluidics Engineer" as the subject. To help us in our selection process, please include in your email the answer to the following question:

- What microbe (bacteria or fungi) do you find interesting, and why?

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability, or veteran status and any other protected class under state or federal law.

About REEgen:

REEgen is an early-stage start-up, founded in February of 2022 and spun out of research in the Barstow Lab at Cornell University supported by an ARPA-E grant. In September of 2022, REEgen licensed its core IP from Cornell's Center for Tech Licensing and was accepted into the Praxis Center for Venture Development. REEgen's lab space is currently located in the Praxis Center for Venture Development on Cornell's Ithaca, NY campus.