Job title
Membrane Development Scientist

About us
OsmoPure's vision is a future where clean water is abundant, reliable, and sustainable. We are on a mission to make advanced water treatment more accessible by replacing energy intensive and chemically demanding methods with a simpler and more efficient approach.

Nature purifies most of the world's fresh water through evaporation and condensation. Our membranes use the same principle, but in a compact, scalable form called pressure-driven distillation. By applying pressure to move water vapor across an air layer, and taking advantage of nanoscale interfacial effects, we can achieve efficient and reliable separation with less energy use, fewer chemicals, and lower cost than today's advanced water treatment technologies. This technology originated from graduate research at the University of Colorado Boulder supported by NASA, and it is now being scaled from applications in spaceflight systems to industrial water treatment, desalination, and wastewater reuse. Our work is supported by the NSF, NASA, Activate, and DOE.

We are building a company rooted in the belief that access to clean water is fundamental. Our values are reflected in how we run experiments, make funding decisions, and grow our team. We believe alignment with this vision and culture is essential to creating a lasting company that delivers meaningful impact for both people and the planet.

Location and on-site requirements
Primary location: Boulder, CO & Golden, CO (Lab work will be carried out in our laboratory in Boulder and the National Renewable Energy Lab in Golden, CO)

On-site requirements: the position requires working on-site in the lab to perform membrane fabrication, coating, and characterization.

Flexibility: Remote work is possible for data analysis, writing, or meetings, but most of the work will be in person at the Boulder or Golden labs.

Travel: Minimal (< 10%) – may include conferences, collaborator visits, pitches, and technology demonstrations.

Compensation range
Salary: $70,000-90,000 (commensurate with experience)

Benefits: Comprehensive medical, dental, and vision with 75% of premiums covered by the company.

About the role

We are hiring a Membrane Development Scientist to join our team in creating the future of water treatment. This role will focus on scaling up our pressure-driven distillation membranes by developing and optimizing fabrication methods for full-scale membrane modules, with hands-on work in nanomaterials, surface coatings, chemical vapor deposition, and membrane characterization. This person will work closely with the CTO, CSO, CEO, and researchers at the National Renewable Energy Laboratory (NREL).

As one of the first employees, this person will play a key role in building the technical foundation for membrane scale-up, including identifying fabrication approaches, developing protocols, designing experiments, and iterating to optimize the performance and manufacturability of spiral wound membrane modules. Success will mean developing fabrication strategies to create consistent membranes that meet performance goals, documenting reliable methods, and clearly communicating both successes and challenges with the team.

This is an exciting startup opportunity to help solve critical environmental challenges through innovative water treatment technologies. The role offers the chance to explore novel chemistries and approaches, work with world-class equipment and facilities (including NREL's roll-to-roll manufacturing line), and contribute directly to developing a scalable solution with global impact.

What you'll do

- Conduct membrane fabrication experiments and characterize membranes using techniques such as electron microscopy, contact angle goniometry, and x-ray spectroscopy
- Conduct membrane performance testing including pressure tolerance, water permeability, and contaminant rejection
- Follow, maintain, and develop SOPs for fabrication, characterization, and testing methods to ensure reproducibility and scalability
- Follow safety procedures and MSDS warnings related to hazardous chemicals. Comply with environmental health and safety guidelines and continue to set a high safety standard for future employees.
- Communicate results to the team through written reports and presentations to guide research direction and project milestones
- Collaborate with the CTO, CSO, CEO, and external labs (e.g., NREL) to advance technology development and align experiments with company goals
- Analyze and present results externally by contributing to funding proposals, program manager updates, and publications

What you'll bring

- B.S. or M.S. in chemical engineering, materials science, chemistry, or a related field

- Ability to design and run experiments, analyze results, perform statistical analyses, and adjust approaches based on data

- Strong documentation practices and ability to develop clear SOPs

- Collaborative, communicative, and curious; driven to pursue innovative solutions and resilient in the face of research challenges; comfortable working in a small, fast-moving team

- Excited about contributing to a startup environment where responsibilities change quickly

- Bonus: experience fabricating and characterizing membranes, thin films, or nanomaterials; leadership skills and interest in mentoring interns to support technical development

What you need to apply (email to nadia@osmopuretechnologies.com)

- CV/Resume (*2 page max*)

- Cover letter (*1 page max*) detailing the following:
    - Relevant laboratory experience
    - Skills you bring to the team to support our work
    - Motivation for working at an early-stage startup solving critical water challenges

Compensation and benefits

The salary range for this role is $70,000 to $90,000. We are committed to equitable compensation across our company, and we offer a generous benefits package to make sure you have the support you need. We cover 75% of the premiums for our employees and 50% of the premiums for their dependents on our base plans for medical, dental, and vision insurance. We offer three weeks of paid time off per year.

Every employee, regardless of gender identity or expression, is also eligible for 8 weeks of paid parental bonding leave after their 1-year anniversary at the company.

Equal employment opportunity

At OsmoPure Technologies, we are working toward addressing global water scarcity by developing advanced materials for sustainable water treatment. We are committed to creating an inclusive environment for all our employees and are seeking to build a diverse team that reflects the people and communities we hope to serve with our revolutionary technology. OsmoPure Technologies is proud to be an equal opportunity employer.