July 12, 2022

Membrane Manufacturing Process Engineer-Research Triangle Park, North Carolina

NALA Membranes is an award-winning membrane startup company developing new reverse osmosis membranes from proprietary chemically resistant polymer materials. A statement often shared in the water treatment industry is, “Chlorine tolerant membranes are the holy grail” and we have those membranes within our grasp.

We believe that we will disrupt the RO membrane market with our uniquely durable and non-fouling membrane product. Our membranes have the potential to accomplish a multitude of objectives including reduce operating costs for RO systems by 30%, open new applications for RO to dramatically reduce energy use in thermal processes and increase adoption of desalination by reducing both complexity and operating/maintenance cost to make systems more sustainable and enable decentralized water treatment.

While NALA Membranes can be operated safely with low levels of free chlorine to eliminate biofouling making them applicable to a wide range of RO applications, initial market targets are in applications where RO membranes are exposed to extreme environments of pH or foulants requiring high frequency cleanings.

Our growing team is engaging with stakeholders, partners, and potential customers both domestically and internationally to develop collaborations and build the pipeline for commercial pilots and sales in 2023. We are looking for an experienced polymer process engineer, to drive and execute technology translation and scale up for NALA Membranes, to join our team in Research Triangle Park, North Carolina. The ideal candidate will have a process engineering background with experience in solution-based polymer processing, preferably roll-to-roll coating and/or membrane related products. This candidate will play a key role in moving our membranes from lab to pilot scale manufacturing and evaluation to meet stakeholder needs, and finally to small commercial scale manufacturing for the larger target markets.

The individual will be expected to take ownership of process development projects and work closely with a vibrant team of internal materials, engineering, and business development staff to move NALA Membranes to the commercial phase. NALA team members enjoy a sustainable and flexible work schedule and insurance benefits including health, life, and short-term disability. NALA is an early-stage company funded by government grants and VC and angel investors. Compensation for this role is negotiable based on experience and is expected to include stock option grants, both initially as well as future grants based on performance and contributions. Opportunities for advancement will abound as the NALA team and business operations grow and expand.

Culture fit is an important characteristic of NALA employees. At NALA, we are fun loving, team driven, and respectful of a functional work/life balance. We are serious about science and committed to the significant positive impact that our membrane technology will have in the water treatment market and on the global water crisis.

Purpose: Develop and translate manufacturing operations to produce targeted performance membranes at the pilot scale and beyond.

Reports to: CTO

Key Functions:

- Work with internal engineers and chemists to translate lab scale processes to a pilot coating line.
- Prepare rolls of membrane sheet samples for internal and customer evaluations using roll-to-roll coating operations.
- Contribute ideas and feedback to lab-scale process development with scale up in mind.
- Develop and implement standard operating procedures and quality control procedures related to membrane fabrication methods and performance
- modify processing equipment to optimize membrane manufacturing operations.
- Design and specify scale-up operation approaches

Responsibilities:

- Lead process engineering activities for roll-to-roll manufacturing of membranes.
- Contribute expertise to all operations at NALA Membranes.
- Contribute to the team to support membrane development, manufacturing, and testing.
- Provide data, experimental results, slides, and written content for technical and business development presentations, proposals, and reports as requested.
- Develop and document methods and procedures for operating and maintaining NALA processing equipment and methods and train other staff as needed.
- Maintain clear records and documentation of research and results.
- Demonstrate and continue to develop expertise in membrane materials, manufacturing, and use.

Requirements:

- M.S./Ph.D. or equivalent experience in chemical engineering, polymer engineering, or related field.
- Direct, hands-on, experience with polymer process engineering.
- Knowledge of polymer membrane materials and typical manufacturing processes.
- Strong verbal and written communication skills
- Able to work independently (self-driven) and within a team environment

Preferred:

- Industrial experience in process engineering related to commercial manufacturing.
- Experience making and/or characterizing microporous membranes and/or thin film composites.
- Experience with lean manufacturing, Six Sigma, or related methodologies.
- Knowledge of membrane construction and materials.
- Knowledge of solvent-based polymer processing.
- Experience with roll-to-roll polymer coating operations.
- Experience translating coatings projects from lab scale to manufacturing.