Materials Process Engineer – Adsorbent Materials Development for Chemical and Biological Defense Applications

Tetramer is seeking a Materials Process Engineer with expertise in lab work, design of experiments, and chemical engineering fundamentals. Reporting to Principal Investigator Heather Lange, this role involves advancing Metal-Organic Framework (MOF) technology development under a Department of Defense-funded program aimed at enhancing protective wear for warfighters against chemical and biological threats. This role is ideal for someone with interest or experience in adsorbent material technology, as well as an ability to collaborate effectively within a high-performance team.

Key Responsibilities:

- **Process Design and Optimization**: Combine knowledge of materials science with process engineering to ensure that manufacturing or production processes are efficient, safe, and yield materials with the desired properties and performance characteristics.
- **Mechanical Aptitude and Troubleshooting**: Demonstrate strong mechanical skills in operating, maintaining, and troubleshooting laboratory and production equipment. Apply mechanical principles to ensure workflow and address technical issues that arise in processing.
- **Research and Development:** Conduct literature reviews, independently develop experimental plans, and assess results against project targets. Design, implement, and document experiments.
- **Project Execution and Technical Excellence:** Demonstrate excellence in laboratory skills and general technical aptitude, including equipment setup, batch processing, and handling materials in a laboratory environment. Execute experiments based on Design of Experiments (DOE) principles under guidance.
- **Data Management:** Ensure data integrity and quality by maintaining organized notebooks, recording detailed results, and communicating findings clearly. Independently draw conclusions from data, relay insights to the team, and support decision-making in project scope.
- **Safety and Lab Maintenance:** Adhere to safety protocols, maintain a well-stocked and organized lab, and participate in Pre-Startup Safety Reviews (PSSRs).
- **Collaboration and Team Engagement:** Communicate results and challenges regularly to the team, contribute to meetings, and foster a collaborative environment. Display active engagement, a commitment to radical candor, and mutual ownership of team success.
- **Documentation and Reporting:** Produce clear and technically sound reports, maintain high-quality technical writing standard.

Qualifications:

- Bachelor's or Master's degree in **Chemical Engineering**, **Chemistry**, **Materials Science & Engineering** (MSE), or a related field.
- Experience in a laboratory setting, demonstrating proficiency in chemical process fundamentals, batch calculations, material transfers, and quality documentation. Familiarity with Design of Experiments (DOE) principles.
- Interest or experience in Metal-Organic Framework (MOF) technology, adsorbent materials, or chemical warfare defense is highly desirable.

Skills:

- Proficient in Microsoft Office Suite (Word, Excel, PowerPoint, Outlook) with data management tools experience.
- Strong analytical skills, attention to detail, and commitment to data integrity.
- Excellent communication and technical writing skills.
- Strong organizational skills with the ability to work independently, plan tasks effectively, and estimate time requirements for project goals.
- Professionalism, collaborative mindset, and ability to work well in multidisciplinary teams.

Compensation and Benefits
This is a full-time role with competitive salary and benefits. In compliance with ITAR government regulations, this position requires proof of U.S. Citizenship or active green card status. Any applicant who receives an offer of employment will be subject to internal E-Verify processes in accordance with company policy.

Physical Requirements

- Prolonged periods sitting at a desk and working on a computer. Must be able to lift up to 40 pounds at times.

About Tetramer Technologies:
Tetramer Technologies is an innovative leader in materials research and development, focused on creating advanced materials with impactful applications across various industries. In partnership with the Department of Defense, our team is advancing MOF-based adsorbent technology aimed at protecting soldiers from chemical threats by integrating MOFs into protective wear that adsorbs and degrades harmful agents on contact. Our collaborative culture values transparency, growth, and commitment to advancing new materials from the lab out into the marketplace or battlefield.

Visit tetramer.com and tetramer.com/programs/mofs/ for more information

Connect on LinkedIn at linkedin.com/company/tetramer

Visit tetramer.com/careers/ to submit a resume for consideration.