

Date: November 2021

Job Title: Research Scientist

About The Coretec Group

The Coretec Group, based in Ann Arbor, MI, is a specialty materials company, looking to commercialize a liquid material, cyclohexasilane, Si_6H_{12} , for potential use in semiconductors, lithium-ion batteries, quantum dots, and silicon lasers. Benefits of this material include faster processing methods and increased performance in all the applications mentioned.

Job Description:

The Coretec Group is seeking a Research Scientist with basic chemical synthesis skills and a ***specialty with air-sensitive chemistry and associated skill sets***. This person should have experience in and mastery of a variety of techniques used in the synthesis and characterization inorganic nanoparticles and quantum dots. Equally as important is the ability to interact and work with a dynamic, high-performance team of professionals looking to build internal expertise in the synthesis of our products.

Responsibilities:

- Working directly with relevant Ann Arbor staff to identify and secure necessary laboratory equipment (***including glove box(es) and schlenk lines***) from appropriate auctions and local sources
- Setup of such laboratory including placement of equipment, purchasing of supplies, etc.
- Learn relevant synthesis techniques and knowledge directly from Chief Technology Officer
- ***Optimization and quantification of synthetic techniques of pyrophoric cyclohexasilane using standard air-sensitive techniques***
- Implementation and documentation of necessary MSDS and additional safety protocols
- Validation, quantification, and optimization of specific synthetic techniques crucial to The Coretec Group's business goals.
- Scale-up activities of specific synthetic routes, as fits best with the business' objectives

Qualifications:

- Ph.D. in Chemistry or related fields
- Hands-on experience in synthetic inorganic chemistry
- Experience in handling and synthesizing pyrophoric materials
- Expertise in standard Schlenk line and glovebox techniques
- Experience in the isolation and separation of nanoparticles, ideally sub 10 nm in size
- Experience with physicochemical analysis and characterization techniques such as NMR, FT-IR, UV-Vis, XPS, SEM, XRD, Raman microscopy, etc.
- Ability to work as a skilled experimentalist in experimental design, materials synthesis, and characterization
- Proven record of publication in peer-reviewed journals and/or patents
- Ability to succeed and thrive as an integral part of R&D team in a heterogeneous and multidisciplinary environment
- Proficient verbal and written communication skills; ability to present ideas and data as both published reports and oral presentations
- Ability to write high-quality manuscripts and reports
- Ability to work under and comply with industry best practices and safety standards

Preferred Qualifications:

- Experience in the synthesis, characterization, and application of small organic molecules
- Experience with surface chemistry
- Experience managing a chemical lab

Location:

This is a full-time position located at The Coretec Group headquarters located in Ann Arbor, MI. Relocation expenses will be considered for the right candidate.

Salary:

Salary will be commensurate with experience.

The Coretec Group is an EEO/AA employer. All individuals, including minorities, women, individuals with disabilities, and veterans are encouraged to apply.

To Apply:

Please send resume and cover letter to: careers@thecoretecgroup.com.