Dragonfly
Insulation

RECRUITMENT PACK

Research & Development Chemist – Inorganic Chemistry

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Welcome to Dragonfly

Thank you for your interest in the role of Research & Development Chemist (Inorganic Chemistry) here at Dragonfly.

Dragonfly Insulation Ltd is an advanced materials manufacturer specialising in the development and production of silica aerogels. It is a spin-out company from Newcastle University and holds patented technology that revolutionises the manufacturing process of silica aerogels.

Dragonfly is currently the sole manufacturer of silica aerogels in the UK. We have a clear vision to be a leading provider of advanced materials in the UK and across the world by enabling more companies in more sectors than ever previously imagined to access the full potential of next generation silica aerogels, recognising the increasing demand for efficient and safer materials to support the drive towards NetZero.

As our new R & D Chemist you will be joining us at an exciting time, as our Business embarks on a period of manufacturing scale up and growth. With the full support from our team and technical leadership from our CTO, Dr Xiao Han, you will be a key contributor to our future success.

We hope that having read through the information provided, you too will feel inspired to become part of our Team.

John Baines

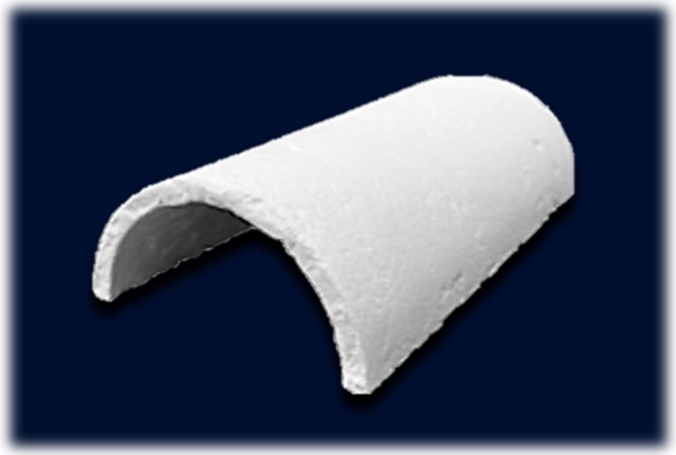
Executive Chair

About Silica Aerogels

Silica Aerogel is an advanced, nano-porous, material with the potential to make a material contribution to fighting climate change. Its extreme properties including lightweight, thermal insulation, fire retardancy and water repulsion have the potential to cut energy consumption, reduce carbon emissions, enable emerging and future technologies and enhance environmental performance.

First conceived in the 1930s for highly specialist uses by NASA, silica aerogel has been proven in the most testing conditions. But despite its remarkable properties, fundamental challenges in formulation and manufacture have restricted its use to niche applications.

These challenges include inflexible chemical formulations that limit the product set; high levels of capital and operational costs associated with manufacturing; the damaging environmental impact of energy and chemical-intensive processes; and fixed, industrial-scale infrastructure necessary for production.



Dragonfly's Purpose & Core Strength

Dragonfly's advanced technology and production processes have been created to address these challenges. By enabling the widespread application of silica aerogel, we will make an enduring contribution to the fight against climate change. We will bring to the world the full potential of silica aerogel.

From formulation to application, Dragonfly's technology is uniquely versatile. From the manufacture of finished products to modular, distributed manufacturing, we create the aerogel solutions customers need while minimising the environmental and financial cost.

We are scaling up to maximise the versatility of our technology to bring to customers the benefits of a **flexible, integrated, sustainable and affordable** advanced material.

Job Description

Dragonfly Insulation Ltd is actively searching for a reliable, highly organised, diligent and experienced R&D Chemist, with a strong background in wet chemistry and organo-inorganic chemistry to drive innovation within our growing Research and Development team.

In joining our team, you will be central in leading pioneering research efforts, contributing to product development and enhancing our intellectual property portfolio in the organo-inorganic domain. A strong sense of IP protection and management is crucial as you will handle sensitive information and proprietary innovations.

Key Duties and Responsibilities

- Conduct company's research projects focused on chemical process, utilising wet chemistry techniques and methodologies.
- Work, under supervision of CTO, to design, perform, and interpret complex experiments, applying a in-depth understanding of chemical reactions, synthesis, and characterisation.
- Demonstrate proficient use of lab and scale-up equipment, evolving processes and techniques to optimise performance.
- Innovate to develop new materials or compounds and contribute to the enhancement of existing materials or technologies, while maintaining a strong focus on the protection of intellectual property rights.
- Collaborate with interdisciplinary teams to translate research findings into commercially viable materials, products and applications.
- Maintain precise records of work undertaken, including planning, methodologies, test results and safety requirements; compiling reports as required.
- Ensure all experimental procedures comply with safety regulations and ethical standards specific to chemical handling and disposal.
- Contribute expertise to R&D activities within the company, always upholding principles of IP confidentiality and security.
- Following and maintaining compliance to all Standard Operating Procedures (SOPs).
- Keeping up to date with field advancements and sharing new knowledge with colleagues.

Health and Safety

- Strict adherence to health and safety protocols, including the correct use of protective equipment and timely reporting of any hazards.
- Ensuring compliance with all UK environmental policies and procedures, handling waste and hazardous substances.

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Person Specification

Evidence of the criteria below will be sought during the application and interview processes.

Essential

- Exceptional analytical thinking and problem-solving skills, particularly within the scope of chemical/material research.
- Technical excellence in wet chemistry procedures and safety protocols.
- Strong sense of responsibility and ethics around the protection and management of intellectual property.
- Ability to communicate complex chemical concepts to diverse audiences, including non-chemists.
- Strong collaborative skills, with experience in multidisciplinary research environments, and the ability to navigate projects with confidentiality requirements.
- Willingness to participate in both independent and collaborative research projects.
- Openness to flexible work hours, depending on the demands of ongoing research activities.
- Readiness for domestic or international travel for research collaboration or conferences.
- A positive, flexible and adaptable approach.
- Capacity to work under pressure and to tight deadlines.
- Effective communication skills, both oral and written.
- The ability to work effectively both independently, and collaboratively within a team.
- Promote and contribute to a positive culture and working environment, valuing individual differences and encouraging and supporting diversity, equality and inclusion.

Qualifications and Experience

Required Qualifications and Experience:

- A PhD or Research-based Master's Degree in chemical engineering or material engineering and science, with a focus on inorganic chemistry.
- Minimum of 3 years of research experience with significant involvement to wet chemistry techniques and organo-inorganic compound synthesis and analysis.
- Demonstrated history of research in the field, as evidenced by theses, publications, patents, or project reports.
- Proficiency with analytical tools and methodologies pertinent to chemistry and materials (e.g., SEM, TEM, EDX, XRD, FTIR, TGA, etc.).

Desirable Experience:

- Direct involvement in product development or technology transfer in the chemistry / materials sector.
- Familiarity with global regulations and standards pertaining to chemical handling, storage, and disposal, and intellectual property.
- Experience securing research funding or grants in the field of chemistry / materials.
- Experience in intellectual property management (e.g., maintenance of confidentiality data/documents, patent application, etc.)

If you don't meet all the Person Specification or qualifications and experience, but are keen and driven to learn, we would still encourage to apply.

Contract and Benefits

Job Title: Research and Development Chemist

Reports to: Chief Technical Officer

Contract: Permanent, full time. Full time working hours are 37.5 hours a week.

Pension: Dragonfly operates a contributory Pension Scheme. Our business contributes 6% of salary, with minimum employee contribution of 4%. Personal contributions through a salary sacrifice arrangement can be requested.

Work Base: Dragonfly Production facility, Prudhoe, Northumberland, NE42 6PJ

Salary: £ Competitive.

Annual Leave: 25 days plus bank holidays.

How to Apply

If you wish to be considered for this role, **please email your curriculum vitae**, **together with a covering statement** which should address your motivation for wanting to undertake the role of Research and Development Chemist with Dragonfly. Please include specific examples of what you have personally been responsible for and achieved and how that demonstrates you meet the requirements of the role and person specification. Please include your address and contact details.

To confidentially discuss the role in further detail please contact: recruitment@dragonflyinsulation.com

To support our Equal Opportunities in Employment Policy you may be required to complete our Recruitment Monitoring Form. All information will be treated in confidence.

Closing date for applications: 6th May 2024 **Interview date:** TBC

Interview location: Dragonfly, Prudhoe, Northumberland, NE42 6PJ

Data Protection Act 2022

Information provided by you as part of your application will be used in the recruitment process. Any data about you will be held securely with access restricted to those directly involved in dealing with your application and in the recruitment process. Once this process is completed the data relating to unsuccessful applicants will be stored for a maximum of one year and then confidentially destroyed.

If you are successful, your application form will be retained and form the basis of your personal record.

Information provided by you in the Recruitment Monitoring Form will be used to monitor Dragonfly Insulations policy on equal opportunities in employment.