# Job Description: Plasma Chemical Engineer / Plasma Chemist

## Details of the role

### Overview

We are looking for an expert in the field of plasma chemical engineering to join our growing Research and Development section at Levidian. The role will specifically focus on optimising and upscaling the current LOOP production system, which uses plasma technology to break down gaseous methane into gaseous hydrogen and high-quality carbon products.

### Accountabilities

**Delivering production research and development projects:** Supporting the delivery of all research projects associated with the development of Levidian patented plasma technology.

**Research strategy:** Focusing on research and development activity to assist the scale up and optimisation of parameters in terms of yield and efficiency of the Levidian LOOP system.

**Thought leadership:** Representing Levidian and keeping our technology market leading

**Quality standards:** Ensure that processes follow company ISO and HSEQ standards and contribute to their continuous improvement.

**Team values:** Contribute to the Levidian Team
- Team cohesiveness, support, motivation, and confidence
- Contribution to broader Levidian team

**Key relationships:**
- **Operations:** The R&D Team works directly with the Engineering Team

### Location and travel requirements

This role is primarily based in our Cambridge, UK office. While you will need to be on site, we have a very flexible approach and understand that you might have responsibilities outside of work – let us know how we can accommodate your needs. Some travel is expected to customer and/or research partner locations, with limited international travel anticipated.

## Details of the successful candidate

### Overview

The successful candidate will have a strong background in plasma chemistry and chemical engineering. Specifically with emphasis on reaction stoichiometry and reaction kinetics of natural gas reforming and natural gas pyrolysis involving methane, acetylene, ethylene, ethane, propane, carbon oxides, etc.; plasma assisted pyrolysis or plasma assisted dry reformation; and optimisation of reactions (ideally for graphene quality and quantity). We are looking for a person with both theoretical knowledge and experimental experience. This would ideally include working on some of the following: dusty plasma, methane plasma, non-equilibrium plasma and atmospheric plasma. They will have experience in a hands-on approach to running physical experimental iterations in a laboratory environment.

### Experience

- Working within an R&D environment
- Chemical/materials laboratory procedures, standards, and safety requirements
- Testing new processes
- Collecting data required to make improvements and modifications
- Overseeing the construction of new devices
- Using and developing process simulation software to work out the best production methods
- Purchasing and installing equipment
- Using scientific principles related to magnitude, momentum, heat transfer etc
- Investigating and troubleshooting process problems
- Scheduling and coordinating work to tight deadlines and within financial budgets
- Ensuring that equipment works to its specification and to appropriate capacities
- Assessing safety and environmental issues

**Leadership style**
- Flexible: To deal with the changes required in a scale up business
- Pragmatic: To be able to translate strategy and plans into tangible projects and progress on the ground
- Collaborative: To allow good working relationships with external parties and internal support teams

**Education and Qualifications**
Master’s level degree in Chemical Engineering, Chemistry ideally related to Plasma processes

**Background on Levidian**

**Our purpose**
We believe in a materially better future – one that ends the choice between growth and sustainability. Our aim is the global enablement of innovation and growth through the production and supply of quality, reliable, carbon negative graphene and hydrogen.

**Overview of our business**
The Levidian process achieves this by:
- **Producing the highest quality graphene.** Our graphene is consistently excellent and can be used to remove the carbon requirement from a range of applications from transport to manufacturing.
- **Removing waste gas (methane) from the atmosphere:** Our process of graphene production uses waste gas as an input – therefore locking the carbon in waste gas into our graphene and out of our atmosphere.
- **Producing clean fuel in the form of hydrogen:** Our process converts waste gas into graphene and hydrogen – this hydrogen is used to produce zero carbon energy

The unique and patented Levidian technology developed in our Cambridge HQ has been operating since 2013. Now with significant new investment and surging demand for each of our products we are investing for rapid growth.

**Our team and our culture**
Our team are:
- Science led: We put scientific research and our belief in its ability to solve problems at the heart of our growth.
- Innovative: We apply our imagination and creativity to delivering results which reflect our commitment to sustainability and environmental excellence.
- Smart: We take a focused approach which allows us to be responsive and practical as we find solutions to real world challenges.
- Collaborative: We believe our impact will be felt most effectively when we collaborate and work well with others – our teams and our global partners.

**Contact:** Dr. Adam Bennett, adam.bennett@levidian.com.