

Superdielectrics Limited



- Position :** Development Engineer
- Sector :** Products for the renewable energy / energy storage sector
- Location :** Chesterford Research Park between Saffron Walden and Cambridge
- Salary :** Negotiable but likely to be in the £30,000-£50,000 bracket and will be very much dependant on ability and experience

Superdielectrics Limited set out in 2013 to develop biocompatible, electrically conducting hydrophilic polymers which had the potential to be used in Bioelectronics. During their research and development programme, they noted that their materials exhibited very unusual electrical properties. Following independent research by the Bristol University Electrochemistry group, it was found that when tested in devices with simple carbon electrodes, the devices were characterised by geometrical capacitances three or four orders of magnitude larger than the geometrical capacitances of carbon electrodes in conventional electrolyte solutions. It was determined that these outstanding electrochemical properties could be exploited in the development of high energy density supercapacitors.

Their goal now is to develop high energy density, low cost, low environmental impact electrical energy storage devices that will help create a clean and sustainable global energy and transportation system.

As part of their continued development, they now have an opportunity for someone to join their team in the position of

Development Engineer

This exciting position will see you working at the cutting edge of technology. You will be primarily responsible for development activities based around batteries, supercapacitors and electrodes. The ongoing chemistry has already achieved an energy density in the cells of 26Whr/kg, the goal is to achieve 250Whr/kg within 5 years. This role will see you taking the science and developing applications for its usage as in commercial applications and products.

You will have a good working knowledge of energy storage and relevant development and testing procedures and will be able to demonstrate the ability to plan, organise and carry out testing work and analysis of results.

About You:

- Degree in Chemistry, Polymer Science, Material Science, Mechanical Engineering, Chemical Engineering or a very closely related subject – this is **essential**
- Post-Graduate Qualification in Chemistry, Polymer Science, Material Science, Mechanical Engineering, Chemical Engineering or a very closely related subject – this is **preferred** (MSc, PhD etc)
- Good understanding and experience of the practical development of energy storage systems, **ideally** with experience of battery, supercapacitor and electrode technology



- A strong, demonstrable ability to undertake energy storage development programmes in a laboratory and workshop environment
- Detailed knowledge of energy storage systems, materials, processes and testing regimes. In particular, understanding of energy density; power density and energy/power delivery with respect to energy storage in battery or supercapacitor systems.
- An ability to analyse power source issues in a variety of products, applications and markets and to be able to devise programmes to address their requirements
- Knowledge of the key industries where energy storage systems are implemented eg power tools, mobile phones, renewable energy, transport (electric vehicles, trains, aviation etc) is preferred. Any interest in renewable energy or energy storage is definitely beneficial as this will ultimately be where the application of the science will be used
- Familiarity with safe systems of work and Health and Safety practices in respect of research into energy storage systems (battery / supercapacitor)
- Experience of technology / science driven research and development and the applications of that science into commercial projects
- Previous experience in a R & D environment
- Able to apply a high level of scientific or engineering rigor to the analysis of data and results, and use this to draw & present conclusions to other scientists and non-technical people
- Able to keep accurate records and to compile technical reports
- Any experience of patents for science or engineered products is beneficial
- Able to work to industry standards eg ISO 9001
- Happy to work with pilot plant for scale up and commercialisation of products
- Have a high regard for health and safety and for appropriate housekeeping
- Not happy to accept the status quo, always wanting to push the boundaries of what is deemed acceptable or possible

Candidates **must** have the right to live and work in the UK. We are **not** able to offer sponsorship for this vacancy.

What is on offer ?

- Basic salary from £30,000-£50,000 (very negotiable according to ability and experience)
- Holidays 25 days plus statutory holidays
- Pension Plan
- The Company intends to set up an 'in service' share option scheme subject to HMRC approval.
- The chance to be part of something truly special

To discuss this role in more detail, please contact our recruitment partner Chris Carter at Nicholas Associates Group in Sheffield.

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