Lithium-Sulfur Anode Research Scientist

OXIS Energy is a world-leading developer of next-generation batteries based on Lithium Sulfur (Li-S) chemistry, which has the potential to offer revolutionary improvements to the energy density of energy storage systems. OXIS' cells offer twice the energy density of the incumbent Li-ion technology, and is therefore attractive for a diverse range of applications such as for **electric vehicles**, unmanned aerial vehicles (UAVs) and satellites.

Based within a technical business park in the beautiful Oxfordshire countryside, OXIS is proud to have a highly-experienced international R&D department with a strong **collaborative attitude** and shared goal of developing the "next big thing" in energy storage technology.

We are now looking for a research scientist to join our dedicated R&D team developing lithium metal anodes for high energy Lithium-Sulfur batteries. The successful applicant will work within a close-knit group that will bring **new ideas** forward and develop them through rigorous testing from lab-scale through to pilot-scale. The role is highly **hands-on**, and will allow for the development of a variety of skills from materials chemistry, electrochemistry and advanced characterisation techniques. We are therefore looking for someone who is highly self-motivated, **proactive** and practical, with an interest in contributing to the electrification of global transport and technology.

Main Responsibilities

- To complete laboratory based research on lithium metal anodes with the aim of increasing the cycle life of high energy Li-S cells
- To deposit thin films onto lithium metal and complete a range of surface characterisation techniques
- To use electrochemical characterisation techniques to analyse Li-S pouch cells
- To liaise with the existing OXIS R&D team to incorporate new materials improvements into state-of-the-art Li-S cells
- To report progress and findings to the anode group principal scientist and to the wider R&D team.
- To prepare full technical reports and presentations on research findings and present them both internally and externally.

Required Skills and Experience

The ideal candidate will have the following attributes:

- A degree or PhD in chemistry, electrochemistry or materials science
- At least 2 years research experience either in an academic or relevant industrial environment
- Demonstrated ability to work both independently and in collaboration with a team
- Excellent attention to detail and a commitment to work in a conscientious and safe manner
- Practical experience of depositing a range of thin film coatings onto metal substrates
- Practical knowledge of relevant surface characterisation techniques including: SEM, AFM and XPS
- A high level of aptitude in using Excel, Microsoft Office, and PowerPoint to analyse data, write comprehensive and coherent reports and deliver presentations with clarity.
- Experience in writing scientific reports, Standard Operating Procedures (SOPs), implementing Control of Substances Hazardous to Health (COSHH) control measures and performing Risk Assessments.

Preferred Skills and Experience

- Previous experience in completing lab-based research into new materials for Li-ion/Li-S batteries or other electrochemical devices is desirable.
- Practice experience in vacuum deposition techniques including: ALD, PVD and CVD.
- Experience of techniques which will enable the deposition of thin polymer films.
- Knowledge/experience in working with lithium metal is highly desirable.
- Knowledge and practical experience of conducting electrochemical testing techniques such as cell cycling, cyclic voltammetry and electrochemical impedance spectroscopy (EIS).