



Development Chemist

About us:

Seloxium Ltd. is a dynamic and diverse spin-out company from the University of Oxford. We are revolutionizing clean growth and the circular economy within the mining & refining sectors by selectively recovering high-value metals from in-process or effluent water streams. Our multi-patented 'selective flocculation' technology will change the way we mine, refine and process these metals, offering a greener and more sustainable solution to metallic resource recovery and reuse.

Among the dissolved species present in industrial process wastewaters and mine tailings, there are valuable and strategically important metals like gold, platinum, and rare-earth metals, which are difficult and costly to remove using current technology. In general, they are not effectively recovered, and instead discharged and lost to the environment as 'sludge'. Seloxium is developing its Selectal™ range of technology to selectively extract, flocculate and recover a wide variety of these high-value metals from process or waste streams. 'Aqua Mining' of valuable metals from wastewater using Selectal™ not only combats environmental pollution but also turns process effluent treatment plants into 'resource recovery factories'.

For more information, please visit our website: www.seloxium.com

About the role:

As a lab-based Development Chemist, you will be responsible for planning and leading a variety of projects at different stages of commercial readiness. You will be expected to design and conduct experiments in synthetic organic chemistry and selective metal extraction employing Selectal™ technology. In addition, Seloxium is a growing company and as such you will be able to contribute to all aspects of the business and be supported in any additional projects you wish to undertake.

This role would suit a researcher with experience in polymer chemistry, metal removal methods, wastewater treatment, or a related field. You should be willing to mentor junior colleagues in a small team and be able to communicate technical information effectively to individuals from other disciplines or from non-technical backgrounds.

Prerequisites:

Essential

- A postgraduate degree (PhD, MSc, etc.) in a relevant field (chemistry, functional polymer chemistry, polymer-metal complexation, hydrogel polymer chemistry organometallic chemistry, etc.).
- 2+ Years (5+ years for master's level candidates) additional experience in a laboratory setting.
- Excellent knowledge of synthetic organic chemistry, ideally employing polymeric starting materials.
- Knowledge of metal coordination chemistry (e.g., ligand field theory, HSAB).
- Working knowledge of analytical techniques common in organic and inorganic chemistry, ideally for solution phase polymeric species (NMR, chromatography, ICP, spectroscopic analysis, etc.).
- Experience in leading/mentoring junior team members.
- Understanding of COSHH and risk assessments in a laboratory setting.
- The ability to translate customer input into technically and economically feasible solutions.
- The ability to form good relationships with colleagues and be able to resolve conflicts considerately and professionally.

Desirable

- Working knowledge of polymer-surfactant interactions and aggregation behaviour
- Working knowledge of polymerization chemistry, polymer analysis, wastewater treatment, or alternative flocculation technologies.
- Experience/Understanding in developing, scaling, and manufacturing chemicals at pilot-scale (>kg scale).
- Experience with selective metal separation technologies (Ion exchange, membranes, solvent extraction, and electrolysis) in a manufacturing or environmental context.
- Working knowledge and experience of standard laboratory skills and techniques (e.g., solution prep and pipetting, data analysis, methodology development, etc.).
- Experience working in an SME/Start-up environment.
- Experience with patents and IP management.

What we offer:

We are looking for a passionate innovator who is inspired by the sustainable and circular economy and wants to help build Seloxium into a green and profitable company that can make a real impact in achieving our goals. In turn, we are able to offer the following benefits:

- Competitive salary
- Private healthcare
- Minimum of 25 paid holidays + UK bank holidays
- Flexible working arrangements
- Generous pension scheme
- Staff social events and away-days
- Cycle-to-work scheme