

Job Title: Junior Research Scientist (Sustainable Superabsorbent Polymers)

Location: Oxford, UK

Employment type: Full-time, Permanent

Company: A&B Smart Materials

About Us:

A&B Smart Materials is an Oxford University-based materials science venture founded by Oxbridge graduates. We are pioneering the next generation of bio-based, biodegradable superabsorbent polymers (SAPs) to replace synthetic SAPs.

SAPs are “magic-like” materials that absorb hundreds of times their weight in water. They are used primarily in hygiene (diapers, pads, cosmetics) and agriculture (soil enhancers), representing a \$17.6B global market. With new EU regulations banning non-biodegradable SAPs in soils from 2028, there is an urgent demand for sustainable alternatives.

We are backed by some of the most prestigious investors in the world, and are part of the Creative Destruction Lab — the leading accelerator for deep tech ventures. Our work has also been recognised globally, including being named a “DeepTech Pioneer” at Hello Tomorrow (2025) and Winner of the Cleantech StartUp Award (South East, 2024). Backed by world-class advisors and based at Oxford’s Begbroke Science Park with access to cutting-edge labs, our mission is to make sustainable SAPs the global standard.

The Position:

We are seeking a Junior Research Scientist with a strong foundation in polymer or materials chemistry to join our growing R&D team. You will play a key role in the design, synthesis, and characterisation of novel bio-based and biodegradable superabsorbent polymers, working closely with senior scientists and the CTO.

This is an exceptional opportunity for a motivated early-career researcher to apply their academic expertise to industrial-scale challenges and help drive one of the most promising transitions in sustainable materials.

Key Responsibilities:

- Conduct hands-on experimental work in polymer synthesis, modification, and characterisation.
- Design, plan, and execute lab experiments, taking ownership of research direction and outcomes.
- Analyse and interpret data to optimise SAP performance, absorption capacity, and biodegradability.
- Contribute to intellectual property development, literature reviews, and technical documentation.
- Collaborate with the R&D team to test, validate, and iterate material formulations.

- Support early-stage scale-up and application testing as the technology progresses toward commercialisation.

Qualifications:

- PhD in Polymer Chemistry, Biopolymers, Materials Science, or a closely related field.
- 0–2 years' postdoctoral or industrial experience.
- Strong wet lab experience and familiarity with polymer synthesis, hydrogels, or crosslinked materials.
- A creative and rigorous scientific mindset, with strong analytical and problem-solving skills.
- Excellent communication and collaboration abilities in a fast-paced, interdisciplinary research environment.

Desired Experience (Nice to Have):

- Has worked on sustainable superabsorbent polymers (SAPs).
- Experience with biopolymers such as cellulose, starch, alginate, or chitosan.
- Previous hydrogel research or formulation experience.
- Exposure to applications in the hygiene (diapers, menstrual pads) or agriculture industries.
- Experience integrating AI or data-driven tools in materials design or optimisation workflows.
- Familiarity with intellectual property (IP) generation or patent preparation.
- Previous involvement in an entrepreneurial or startup environment.

Benefits & Perks:

- Salary: £40,000 – £50,000 per annum.
- Competitive compensation package with equity, so you share directly in the company's success.
- Significant long-term upside as the company scales in a rapidly growing global market.
- Comprehensive health insurance and wellbeing package.
- 28 days of paid holiday annually.
- Flexible working hours with hybrid (on-site + remote) options.
- The chance to help shape the global future of sustainable SAPs in a company building momentum with leading investors, accelerators, and awards.
- A creative, fast-moving environment where your work will have a direct impact on products, IP, and company growth.

At A&B Smart Materials, we are looking for more than capability — we are looking for curiosity, creativity, and commitment. If you are an ambitious scientist eager to apply your skills to one of the fastest-growing areas of sustainable materials innovation, we want to hear from you.

Application Form: <https://forms.gle/4UQXPrV2qHkMqMCb9>

Recruitment email: recruitment@absmartmaterials.com