



Job Title: Senior 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 an exceptionally talented Senior Research Scientist to join our growing R&D team and help shape the future of sustainable polymer and hydrogel science. You will play a leading role in developing next-generation biodegradable superabsorbent polymers, combining fundamental chemistry with applied innovation.

You will lead your own research projects, mentor junior scientists, and work closely with the founding team to develop intellectual property, solve complex technical challenges, and translate ideas from concept through to scalable solutions. This is a rare opportunity to drive scientific innovation in a venture at the forefront of sustainable materials.

Key Responsibilities:

- Lead R&D activities focused on the synthesis, formulation, and performance optimisation of sustainable SAPs.
- Design, plan, and execute complex experiments in wet chemistry laboratories.
- Bring creativity and rigour to problem-solving, helping overcome technical bottlenecks.
- Work closely with the CTO and founding team to develop and protect new IP.
- Mentor and support junior scientists, fostering a collaborative and innovative research culture.

- Contribute to scientific publications, patents, and conference presentations.
- Bridge research and application — translating laboratory innovation into scalable, real-world products.

Qualifications:

- PhD in Polymer Chemistry, Biopolymers, Materials Science, or a closely related field.
- 3–8 years' postdoctoral or industrial experience in polymers, biopolymers, or hydrogels.
- Proven expertise in polymer synthesis, modification, and characterisation.
- Strong analytical and problem-solving skills, with a track record of scientific creativity.
- Experience leading research projects or supervising others.
- Excellent communication and collaboration abilities in an interdisciplinary 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.
- Proven experience in intellectual property (IP) generation, including patents or proprietary formulations.
- Previous involvement in an entrepreneurial or startup environment, or experience leading collaborations across academia and industry.

Benefits & Perks:

- Salary: £50,000 – £70,000 per annum with generous equity package, 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 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/hoZ9K9Gfas3qvqy19>

Recruitment email: recruitment@absmartmaterials.com