

Title: Materials Chemist

Salary: \$110,000 – 130,000 p.a. plus super contribution of 10%

Department: Quantum Technology

Location: Sydney, Australia

Type: Full time

Summary

Materials chemistry position requiring a post PhD with a strong background in the synthesis and characterisation of nanomaterials. Full-time and based in the Sydney CBD.

About Us

Archer Materials Limited is an ASX listed technology company that builds advanced semiconductor devices, including processor chips relevant to quantum computing.

We create disruptive deep tech to address complex global challenges.

Archer is developing a novel quantum computing processor chip for practical applications in mobile technology. As a member of the IBM Quantum Network, Archer is one of only a few companies globally commercialising quantum computing processor hardware.

The Role

As part of Archer's growing quantum technology team, you will be working alongside experimental physicists, nanofabrication engineers, chemists, and theoreticians developing electron spin-based qubit nanomaterials. Your work will focus on synthesising and characterising qubit nanomaterials and addressing challenges relevant to the continuing development of the materials into viable qubit architectures.

You will bring a strong technical background in materials chemistry, and a proven track record in delivering world-class outcomes in nanomaterials science and innovation.

Responsibilities

- Synthesise, characterise, and develop nanomaterials as part of the implementation of Archer's commercialisation plans.
- Work closely with Archer team members and key external stakeholders in the collaborative development of quantum materials for qubit applications.
- Independently identify and address challenges relevant to the characterisation of quantum materials in line with the development roadmap.
- Participate in the development of intellectual property in-line with agreed strategy and policies.
- Communicate technology development outcomes through several publication channels including scientific reporting and publication in high-impact journals and patent applications.
- Grow Archer's strategic network in the field of quantum computing technology.
- Contribute to applications for relevant project funding.
- Report, document, and assess completed technology development milestones.

Required Skills, Experience & Qualifications

- PhD in Chemistry or similar.
- Proven knowledge and expertise in the synthesis and characterisation of nanomaterials.
- Experience with spectroscopic and microscopic analysis techniques for nanomaterials.
- Familiarity with quantum materials and their applications.
- Proven record of producing high-quality research outcomes in an academic or industrial setting.
- Supervisory and/or leadership experience in scientific R&D settings.
- Keen interest in developing quantum materials for real-world applications.
- Familiarity with qubit materials.

Desired Skills and Experience

- Experience in the use of a combination of characterisation techniques including, XPS, XRD/Neutrons, Raman, EPR/ESR, solid state NMR, Muon Spectroscopy, AFM, SEM/TEM, SAED, and TGA.
- Experience in one or more nanomaterials synthesis techniques, including pyrolysis, solvothermal, wet-chemistry and solid-state reactions.
- Experience in the handling and synthesis of nanomaterials in a glovebox environment.
- Familiar with colloidal science and self-assembly chemistry.
- Keen interest in 2-D materials, carbon-based nanomaterials, metal organic frameworks, or transition metal dichalcogenides.

The role requires the right to live and work in Sydney, Australia on a full-time basis.