# Position Details

## Research Scientist/Engineer- CSOF5

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| The following information is for applicants |
| Advertised Job Title | Research Scientist in Cathode Materials for Metal-ion Batteries |
| Job Reference | 95823 |
| Tenure | Specified Term of 3 years Full-time |
| Salary Range | AU$105,806 – AU$114,500 per annum plus up to 15.4% superannuation |
| Location(s) | Melbourne (Clayton), VIC |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * Australian/New Zealand Citizens
* Australian Permanent Residents
* Australian Temporary Residents, with an existing valid visa and unrestricted work rights for the duration of the term (at least until mid-2027) and **no requirement for visa sponsorship from CSIRO**.
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| Position reports to the | Team Leader, Battery Materials and Design |
| Client Focus – Internal | 60% |
| Client Focus – External | 40% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Tony Hollenkamp via email at tony.hollenkamp@csiro.au or phone +61 408 328 322 |
| How to apply | Apply online at <https://jobs.csiro.au/> Internal applicants please apply via **Jobs Central**If you experience difficulties when applying, please email careers.online@csiro.au or call 1300 984 220. |

**Acknowledgement of Country**

CSIRO acknowledges the Traditional Owners of the land, sea and waters, of the areas that we live and work on across Australia. We acknowledge their continuing connection to their culture and pay our respects to their Elders past and present. View our [vision towards reconciliation](https://www.csiro.au/en/about/Indigenous-engagement/Reconciliation-Action-Plan).

**Child Safety**

CSIRO is committed to the safety and wellbeing of all children and young people involved in our activities and programs. View our [Child Safe Policy](https://www.csiro.au/en/about/policies/child-safe-policy).

### Role Overview

The role of Research Scientist/Engineer staff is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. They may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. The Research Scientist/Engineer will have the opportunity to build and maintain networks, play a lead role in securing project funds, provide scientific leadership and pursue new ideas and approaches that create new concepts.

This role will play a pivotal part in expanding CSIRO’s research efforts into electrode materials. As part of the Battery Materials and Design Team, this role will be a key contributor to developing lithium-ion and sodium-ion cathode materials for CSIRO and its customers. The role will also involve collaboration and communication across multiple groups and projects, internal and external to CSIRO.

The primary responsibility of this role is to understand the requirements associated with lithium-ion and sodium-ion cathode materials, in terms of their electrochemical performance and with regard to, the specification of raw materials needed for their production. The latter will be increasingly shaped by Australia’s development of its reserves of critical minerals.

Working with the broader team, the Research Scientist will identify appropriate cathode materials to pursue and then undertake synthesis, physicochemical characterization, and evaluation of electrochemical performance. This role will require deep hands-on expertise in the synthesis and characterization of commercially-relevant cathode materials, and in the evaluation of these materials in different cell formats and applications. Further, this role requires an understanding and knowledge of the factors that influence material performance in cathode and cell manufacturing processes, and the in end-customer applications.

### Duties and Key Result Areas

* Practise proper laboratory procedures in compliance with Corporate HSE policy and maintain a safe lab environment.
* Develop and implement commercially-relevant cathode synthesis processes.
* Select, and operate appropriate R&D cathode synthesis equipment.
* Characterize the composition, crystal structure and microstructure of cathode materials.
* Map the likely impurities in each candidate cathode material and quantify any adverse effects.
* Design and conduct electrical/electrochemical performance measurements at both component and cell level.
* Incorporate necessary quality control methods to ensure material performance.
* Collaborate closely with other battery researchers within the team and with colleagues in the Mineral Resources BU.
* Coordinate the installation of instruments when required and support improvements to testing infrastructure.
* Supervise junior team members, technicians and interns.
* Communicate openly, effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Work collaboratively as part of a multi-disciplinary research team to carry out tasks in support of CSIRO’s scientific objectives.
* Adhere to the spirit and practice of CSIRO’s Values, Code of Conduct, Health, Safety and Environment procedures and policy and diversity initiatives.
* Other duties as directed.

## **Selection Criteria**

#### Essential

*Under CSIRO policy only those who meet all essential criteria can be appointed.*

1. A PhD in materials science, chemistry, chemical engineering, or related scientific discipline.
2. A minimum of 3 years of commercially relevant post-graduate experience in either sodium-ion or lithium-ion battery cathode synthesis.
3. Proven familiarity with glovebox use and battery testing equipment.
4. Demonstrated ability to undertake original, creative and innovative research by generating and pursuing novel ideas and solutions to scientific research problems.
5. A demonstrated publication history of authorship on scientific papers in peer reviewed journals and/or reports, grant applications or inventorship on patent applications.
6. Deep understanding of lithium-ion batteries and cathode chemistry, including composition-process-performance relationships.

## **Desirable**

1. Strong organizational and project management skills.
2. Hands-on synthesis, characterization and testing of either commercial lithium-ion and/or sodium-ion cathodes.
3. Demonstrated proficiency with cell testing methodologies, data analysis and interpretation.
4. Plan and execute statistical designs of experiment (DoE’s) to identify relevant factors and optimize performance.
5. Strong expertise in materials characterization from atomic to electrode scale.
6. Ability to prioritize and manage time effectively.
7. Excellent communication skills and ability to simplify complexity.
8. Demonstrated ability to partner with customers and external experts to accelerate innovation.

## **Required Competencies**

* **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources in order to do this. Collaborates with other teams as well as industry colleagues.
* **Influence and Communication:** Uses knowledge of other party's priorities and adapts presentations or discussions to appeal to the interests and level of the audience. Anticipates and prepares for others’ reactions.
* **Resource Management/Leadership:** Allocates activities, directs tasks and manages resources to meet objectives. Provides coaching and on the job training, recognises and supports staff achievements and fosters open communication in the team.
* **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate responses by adapting/creating and testing alternative solutions.
* **Independence:** Plans, sets and works to meet challenging standards and goals for self and/or others. Recognises where endeavours will make the most impact or difference, decides on desired outcome and sets realistic goals to reach this target.
* **Adaptability:**Copes with ambiguity or situations that lack clarity. Adapts readily to changing circumstances and new responsibilities (which may include activities outside own preferences) in the interests of achieving team objectives. Recognises the need for and undertakes personal development as a result of change.

Special Requirements

Appointment to this role is subject to provision of a pre-employment background check and may be subject to other security/medical/character clearance requirements.

* The successful candidate will undertake a pre-employment background check. Please note that individuals with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) and [Manufacturing - CSIRO](https://www.csiro.au/en/work-with-us/industries/manufacturing) for more information.

CSIRO is a values-based organisation.  In your application and at interview you will need to demonstrate behaviours aligned to our values of:

* People First
* Further Together
* Making it Real
* Trusted