# Position Details

## Research Scientist/Engineer- CSOF5

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| The following information is for applicants | |
| Advertised Job Title | Research Scientist in Electrochemistry, Electrolysis and PEM (Polymer Electrolyte Membrane) |
| Job Reference | 70551 |
| Tenure | Specified Term of 2 years |
| Salary Range | AU$98 735 to AU$106 848 pa (pro-rata for part-time) + 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 and Australian Permanent Residents * Australian temporary residents currently residing in Australia (visa sponsorship may be provided to eligible candidates) |
| Position reports to the | Team leader, Electrochemical Energy Systems |
| Client Focus – Internal | 80% |
| Client Focus – External | 20% |
| Number of Direct Reports | 0 |
| Enquire about this job | Dr Christopher Munnings via email at Christopher.munnings@csiro.au or phone +61 3 9545 7881 |
| 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](mailto:careers.online@csiro.au) or call 1300 984 220. |

### Role Overview

The role of Research Scientist Staff in CSIRO is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. You may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. You 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.

As part of the Electrochemical Energy Systems team, this role will contribute to research on a wide range of projects looking to develop electrochemical cells for low temperature synthesis of chemicals or hydrogen production. This role will interact with a wide range of other specialists and will have key responsibility for the development of the electrochemical cell including stack design and materials selection / development. The aim of this research is to reduce emissions from Australia’s energy sector.

The Research Scientist in Electrochemistry, Electrolysis and PEM (Polymer Electrolyte Membrane) will join a team based at the Centre for Hybrid Energy Systems (CHES). Based in Clayton, Victoria, this is a state-of-the-art facility showcasing CSIRO’s substantial expertise and capability in integrating energy storage, renewable energy hydrogen (including electrolysis) and fuel cell technologies, fuel processing, systems design and construction.

### Duties and Key Result Areas

* Under the supervision of more senior researchers, assist in the planning and preparation of research proposals and carry out research investigations, requiring originality, creativity and innovation.
* Carry out research in the design and development of novel low temperature electrochemical cells with solid electrolytes.
* Undertake measurements of cells with electrochemical analytical equipment, XRD, SEM and various gas analyses.
* Develop new research areas with a view to reducing emissions from Australia’s energy sector.
* Work with the team and group leader to develop funding proposals and multi-disciplinary research projects.
* Contribute to and lead aspects of scientific projects.
* Maintain safe working practice when working with hazardous chemicals.
* Maintain confidentiality when dealing with commercially sensitive information.
* Undertake regular reviews of relevant literature and produce high quality scientific papers suitable for publication in quality journals and client reports.
* Prepare appropriate conference papers and present those at conferences as agreed.
* Effectively manage projects including timely delivery of agreed milestones, supervision of staff and management of project budgets.
* Purchase and maintenance of scientific equipment required for the research role.
* Represent CSIRO externally, including in public forums, with industry or the research sector or with Government.
* Undertake experimental and/or observational research activities and supervise and/or train others to ensure experiments are established in accordance with research design as required.
* Draw on professional expertise, knowledge of other disciplines and research experience to recognise opportunities for innovation and generate new theoretical perspectives by pursuing new ideas/approaches and networking with scientific colleagues across a range of disciplines.
* Liaise with clients to determine their needs and take personal responsibility for client satisfaction.
* Address problems promptly and in a constructive manner.
* May provide supervision and coaching to students and technical staff.
* 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, regionally dispersed 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, Diversity initiatives and Making Safety Personal goals.
* Other duties as directed.

## **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.

## **Selection Criteria**

#### Essential

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

1. A PhD (or an equivalent combination of qualifications and research experience) in a relevant field such as electrochemistry, material science or a closely related field.
2. Demonstrated experience with electrochemical cells such as fuel cells, electrolysers or cells for the electrochemical synthesis of simple molecules.
3. Demonstrated experience with a range of electrochemical analytical equipment, XRD, SEM and various gas analyses.
4. Excellent oral and written communication skills.
5. Demonstrated ability to undertake original, creative and innovative research by generating and pursuing novel ideas and solutions to scientific research problems.
6. A demonstrated publication history of authorship on scientific papers in peer reviewed journals and/or reports, grant applications or inventorship on patent applications.

## **Desirable**

1. Demonstrated track record in the writing of successful scientific proposals.
2. Experience in the scale up or manufacture of electrochemical cells.
3. Experience in the running or maintaining of scientific facilities or equipment in particular XRD, gas analysis equipment and/or advanced electrochemical analysis equipment.
4. Experience in the safe use of hazardous materials in particular explosive and/or toxic gases.

Special Requirements

Appointment to this role may be subject to conditions including provision of a national police check as well as other security/medical/character clearance requirements.

* The successful candidate will be asked to obtain and provide evidence of a National Police Check or equivalent. Please note that people with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
* If the successful candidate is not an Australian Citizen or Permanent Resident, they may be required to undergo additional security clearances, which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test).- https://ielts.com.au/

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. To find out more visit us [online](http://www.csiro.au/)!

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

* 1. People First
  2. Further Together
  3. Making it Real
  4. Trusted

Find out more about CSIRO’s research into electrochemical systems [CHES](http://www.csiro.au/ches) and CSIRO [Energy](https://www.csiro.au/en/Research/EF)