# Position Details

## Research Projects- CSOF3

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| The following information is for applicants | |
| Advertised Job Title | Research Technician - Electrofermentation |
| Job Reference | 72051 |
| Tenure | Specified term until 30th June 2022  Full-time |
| Salary Range | AU$63 954 to AU$80 937 pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Black Mountain, Canberra |
| 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 who are currently residing in Australia and have the right to work for the expected duration of the term (at least to end of 30th June 2022), with no requirement for sponsorship. |
| Position reports to the | Team Leader, Nitrogenase Engineering |
| Client Focus – Internal | 100% |
| Client Focus – External | 0% |
| Number of Direct Reports | 0 |
| Enquire about this job | * Contact Trevor Rapson via email at trevor.rapson@csiro.au or phone +61 2 62464104 |
| 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

Hydrogen provides a flexible means of storing and transporting energy. Having been promoted as a 'future fuel' for a number of years, the overall understanding of hydrogen's potential is increasing. If produced and transported at scale, it could be integrated into the future energy value chain to support power generation, transport, food and agriculture, water, resources, heavy industry and more. The Research Technician – Electrofermentation will join a multi-disciplinary team seeking to provide new sources of green, transportable hydrogen produced by microorganisms.

The role of Research Projects staff in CSIRO is to collaborate in scientific and technological activities with other research staff usually by assisting with detailed planning, undertaking or assisting with experimental, observational or technology development work, and in carrying out the more practical aspects of the work.

### Duties and Key Result Areas

* Develop and optimise conditions for microbial electrofermentation.
* Assist in planning and execute experiments to improve production yield.
* Analyse the fermentation products using gas chromatography (GC) and NMR.
* Under technical direction undertake experiments, laboratory analyses or technology development activities (some non-routine) using a range of techniques, often working on a number of parallel and competing tasks.
* Design new processes or apparatus by adapting existing techniques and components to meet special circumstances or undertake modifications to methods requiring some innovation.
* Conduct investigations and inspections in the laboratory including associated analysis possibly involving statistical or graphics software.
* Work with discretion to decide on the timing of operations within the work team’s plan and plan ahead to meet experimental and/or project demands.
* Independently test possible solutions to resolve identified problems.
* Maintain confidentiality when dealing with commercially sensitive information.
* Maintain safe working practices when using hazardous chemicals or reagents.
* 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:** Proactively seeks and considers the ideas and opinions of others from within and outside the team to help form decisions, plans or actions.
* **Influence and Communication:** Puts forward ideas by presenting factual information supported by data, definitions, examples, illustrations or other aids, which will assist in conveying meaning.
* **Resource Management/Leadership:** Provides instruction and assists other staff to complete allocated tasks and activities.
* **Judgement and Problem Solving:** Identifies and considers the implications of a range of available alternatives in order to select the most appropriate response to problems of a familiar or recurring nature.
* **Independence:** Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).
* **Adaptability:**Willingness to change ideas or perceptions based on new information, contrary evidence or other people's points of view. Prepared to try out different approaches.

## **Selection Criteria**

#### Essential

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

1. Relevant degree or equivalent relevant work experience in chemistry, biochemistry, microbiology or a related field.
2. Demonstrated laboratory experience in one or more of the following:

* Electrochemical techniques such as bulk electrolysis or cyclic voltammetry;
* Culturing microorganisms;
* Basic molecular biology techniques such as cloning, sequencing or DNA manipulations;
* Chemical analysis e.g. gas chromatography or NMR.

1. Demonstrated ability to troubleshoot basic problems in the laboratory.
2. Good oral and written communication skills.
3. Proven ability to work effectively as part of a multi-disciplinary research program and carry out tasks under general direction from researchers.

## **Desirable**

1. Experience in bio-electrochemistry such as electro-fermentation, microbial electrosynthesis or microbial fuel cells.
2. Experience carrying out *in vitro* evolution.

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.

## **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 [Agriculture and Food](https://www.csiro.au/en/Research/AF) and the [Hydrogen Future Science Platform](https://research.csiro.au/hydrogenfsp/)