# Position Details

## Research Scientist/Engineer- CSOF6

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| The following information is for applicants | |
| Advertised Job Title | Senior Research Engineer |
| Job Reference | 88149 |
| Tenure | Specified Term of 3 years  Full-time |
| Salary Range | AU$117,917– AU$138,176 per annum (pro-rata for part-time)  plus up to 15.4% superannuation |
| Location(s) | Clayton VIC |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * All Candidates |
| Position reports to the | Team Leader Continuous Flow Catalysis |
| Client Focus – Internal | 10% |
| Client Focus – External | 90% |
| Number of Direct Reports | 0 |
| Enquire about this job | [John.chiefari@csiro.au](mailto:John.chiefari@csiro.au) (03) 9545 2508 |
| 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. |

**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).

### Role Overview

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

This position will form part of a commercial project team within the Advanced Materials and Processing program and will work on an industry-funded project for the design, development, and construction of a reforming unit for generating hydrogen gas from a hydrogen carrier.

This role will lead critical research activities for designing, building, commissioning, and testing of a Demonstrator Scale hydrogen reformer unit. The reformer unit will utilise a hydrogen carrier molecule and generate hydrogen gas through catalytic processes. The Senior Research Engineer will work under the project leader, and be a part of a multidisciplinary project team, including engineers, chemists, materials scientists and other peers.

### Duties and Key Result Areas

* Adhere to the spirit and practice of CSIRO’s Code of Conduct, Health, Safety and Environment procedures and policies, Diversity initiatives and Zero Harm goals.
* Ability to function both independently and as part of a team, maintaining a strong commitment to team-based processes and outcomes.
* Lead staff and influence other internal and external partners to achieve the project’s goals and promote the Business Unit in external forums.
* Identify and adapt to changes in client needs and market changes.
* Develop challenging but realistic research plans and negotiate and manage resource requirements with research managers or clients.
* Take responsibility for smaller research projects or elements of larger projects within and/or across Business Units.
* Assist other research chemists in planning and (if necessary) performing chemical reactions on scale, including separation and purification in order to meet engineering designs.
* Act as a trusted advisor, utilising knowledge of the clients’ business and understanding of their underlying needs
* Communicate research results through electronic laboratory notebooks, written reports and oral presentations.
* Undertake experimental and/or observational research activities and supervise/train others to ensure experiments are established in accordance with research design.
* Provide supervision and coaching to students and technical staff, as necessary.
* 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.
* Other duties as directed.

## **Selection Criteria**

#### Essential

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

1. A M.Eng. or Ph.D. in a relevant field such as Chemical Engineering with minimum 5 years relevant experience.
2. Demonstrated ability to undertake original, creative and innovative research by generating and pursuing novel ideas and solutions to scientific research problems.
3. Demonstrated track record of using continuous flow processing and liquid/gas and gas-phase processing.
4. Demonstrated ability to prepare P&IDs and other engineering drawings for chemical processes.
5. Demonstrated experience and track record of chemical processes on pilot-/production-scale, including design, building and commissioning hydrogen gas reforming units.
6. Experience in the use of catalysis, e.g., for the generation of hydrogen.
7. Demonstrated use of Computer Aided Design (CAD) software for the design of chemical reactor apparatus.

## **Desirable**

1. Knowledge and use of characterization and analysis techniques used in the chemicals industry. For example, but not limited to, NMR, IR, mass spectrometry, Raman, UV, ELS, HPLC, GC
2. A demonstrated publication history of authorship on scientific papers in peer reviewed journals and/or reports, grant applications or inventorship on patent applications.

## **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:** Identifies critical stakeholders and influences them via an influential third party, for example through an established network, to gain support for sometimes contentious proposals/ideas.
* **Resource Management/Leadership:** Sets up and maintains effective and efficient work teams and manages performance and resources, to achieve objectives. Chooses appropriate management strategies and communication styles to maintain high levels of motivation and productivity. Gives feedback for development purposes and provides support and direction for improvement.
* **Judgement and Problem Solving:** Anticipates and manages problems in ambiguous situations. Develops and selects an appropriate course of action and provides for contingencies. Evaluates, interprets and integrates complex bodies of information and draws logical conclusions, synthesises proposals and defends options with reasoned arguments.
* **Independence:** Assesses the risk and opportunity of identified strategies, options and actions. Overcomes problems and setbacks in achieving goals. Invariably includes consideration of value-added future impact on bottom line when determining the optimal and efficient use of resources.
* **Adaptability:**Demonstrates flexibility in thinking and adapts to, and manages, the increasing rate of organisational change by adjusting strategies, goal and priorities.

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 Clearance or equivalent. 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](https://my.csiro.au/OrgInfo/Structure/Science/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