# Position Details

## Research Scientist/Engineer- CSOF5

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| The following information is for applicants | |
| Advertised Job Title | Research Engineer |
| Job Reference | 87708 |
| Tenure | Indefinite  Full-time |
| Salary Range | AU$102,724 - AU$111,165 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 | * Australian Citizens Only * Australian/New Zealand Citizens and Australian Permanent Residents |
| Position reports to the | Team Leader Continuous Chemical Processing |
| Client Focus – Internal | 20% |
| Client Focus – External | 80% |
| Number of Direct Reports | 0 |
| Enquire about this job | John.Chiefari@csiro.au or phone +61 3 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 Research Engineer may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. The Research Engineer will have the opportunity to build and maintain networks, involved in securing project funds, provide scientific leadership and pursue new ideas and approaches that create new concepts.

This position will work closely with CSIRO scientists and engineers to deliver practical manufacturing solutions to industrial clients. This work involves converting existing manufacturing procedures to more efficient continuous flow processes, or establishing new chemical synthesis routes as continuous flow processes under the supervision of a senior scientist/engineer.

This role forms part of the Continuous Chemical Processing team, and will provide critical research activities for designing, building, commissioning, and testing of a Demonstrator Scale hydrogen reformer unit. This position will work under the supervision and direct instructions of a senior engineer and project leader, and as part of a multidisciplinary project team, including chemists, materials scientists and others.

This role will work within CSIRO's FloWorks facility and will have the opportunity to contribute to other projects in our Ending Plastic Waste initiative, such as the Depolymerization of Plastic Waste, and projects investigating the synthesis of sustainable aviation fuels using mobile container plants.

### Duties and Key Result Areas

* Adhere to the spirit and practice of CSIRO’s Code of Conduct, Health, Safety and Environment procedures and policy, 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.
* Under the direction of a senior scientist/engineer, deliver practical manufacturing solutions for the nominated products to industrial clients.
* Under the direction of a senior scientist/engineer, develop new processes for preparing chemicals and polymers on scale, using continuous flow chemical processing techniques.
* Assist other research chemists in planning and performing chemical reactions on scale, including separation and purification
* Oversee operation of chemical reactor and downstream processing equipment
* Undertake general maintenance of lab- and pilot-scale reactor equipment and coordinate repair of, ordering of replacement parts for and upgrades to said equipment.
* 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.
* 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. (or an equivalent qualification and research experience) in a relevant field such as Chemical Engineering or Process Engineering.
2. Demonstrated experience of using continuous flow processing.
3. Demonstrated experience of chemical processes on pilot-/production-scale, including knowledge of the advantages of continuous flow compared to batch processing.
4. ES Demonstrated use of Computer Aided Design (CAD) software for the design of chemical reactors.
5. Knowledge and use of characterization and analysis techniques used in the chemicals and polymers industry. For example, but not limited to, NMR, IR, mass spectrometry, Raman, UV, ELS, GPC, HPLC, GC

## **Desirable**

1. Demonstrated ability to prepare P&ID for chemical processes.
2. Experience in hydrogen and/or gas phase and gas/liquid processing.
3. 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:** 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

Include if relevant:

* 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 [CSIRO Manufacturing](https://www.csiro.au/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