# Position Description

## Research Projects – CSOF4

The following information is for applicants

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| Advertised Job Title**:** | Research Projects Officer: Experimental Scientist Flow Chemistry |
| Job Reference: | 60694 |
| 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 Only   * All Candidates |
| Percentage of Client Focus - Internal: | 0% |
| Percentage of Client Focus - External: | 100% |
| Reports to the: | Team Leader – Continuous Chemical Processing |
| Number of Direct Reports: | 0 |
| Name and Contact Details For Applicant Enquiries | Dr Christian Hornung: [christian.hornung@csiro.au](mailto:christian.hornung@csiro.au) or 03 9545 2532 |
| Contact Details For Applying | Call 1300 984 220 or email [careers.online@csiro.au](mailto:careers.online@csiro.au). |
| How to Apply: | Please apply online at [jobs.csiro.au](https://jobs.csiro.au/) and enter the requisition number**.** Internal applicants please apply via ‘Jobs Central’ through the ‘People Hub’ icon |

## Role Overview:

Research Projects staff in CSIRO collaborates 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. Research Projects staff may be involved in providing consulting services, science management and/or industry liaison.

The Experimental Scientist – Flow Chemistry will work with industrial partners to convert existing, or establish new, chemical synthesis projects, as continuous flow processes under the supervision of a senior scientist. The role will involve working closely with industrial partners to deliver practical manufacturing solutions for the nominated products.

The experimental scientist will work on industry projects as part of FloWorks, CSIRO’s new flow chemistry centre located in Clayton. FloWorks is a technology transfer centre providing access to CSIRO’s cutting-edge research into industrial processing for Australian and international chemical manufacturers. The centre operates state-of-the-art flow chemistry reactor technology for the development of chemical processes, combining capabilities to do discovery of new chemical routes in the laboratory, reaction optimisation under manufacturing conditions and final process scale-up to pilot and production scale.

## Duties and Key Result Areas:

* Adapt and/or develop original experimental methods/equipment/software/concepts/ ideas in support of existing and further research, promptly addressing where methods may not be defined and initiative is required in seeking new approaches to meet experimental and/or technological needs.
* As part of a project team, develop new chemical manufacturing routes for industrial research projects using flow chemistry and/or high throughput screening methods.
* 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, often regionally dispersed research team, and business unit to carry out tasks in support of CSIRO’s scientific objectives.
* Adhere to the spirit and practice of CSIRO’s Code of Conduct, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

## Competencies:

1. **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.**
2. **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.**
3. **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.**
4. **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
5. **Independence: Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).**
6. **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 changes.

## Selection Criteria:

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

1. Bachelor’s degree in Chemistry or Chemical Engineering.
2. Knowledge and commitment to safe work practices in the laboratory.
3. Experience with synthetic organic chemistry – planning synthetic routes and experiments under the supervision of a senior chemist.
4. Experience in chromatographic separation techniques, such as GC, HPLC, column chromatography, and also in recrystallization techniques.
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.
6. Proven ability to communicate effectively, both verbally and in writing with evidence of ability to co-operate and perform effectively as part of a research team, and work in a multidisciplinary project.

## Desirable Criteria:

1. Experience of continuous flow chemical processes and scale-up of chemical processes. A knowledge of the advantages of continuous flow chemical processes compared to batch processes.
2. Experience with polymer chemistry – a knowledge of controlled radical polymerization and other polymerization techniques.

## About CSIRO:

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Find out more about CSIRO [Manufacturing](https://www.csiro.au/en/Research/MF)