# Position Details

## Research Scientist/Engineer- CSOF5

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| The following information is for applicants |
| Advertised Job Title | Characterisation Specialist – Mass Spectrometry and NMR Spectroscopy |
| Job Reference | 91610 |
| Tenure | Indefinite Full-time or Part-time 55+ hours/Fortnight |
| Salary Range | AU$105,806 - AU$114,500 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/New Zealand Citizens and Australian Permanent Residents |
| Position reports to the | Team Leader Molecular Interactions |
| Client Focus – Internal | 85% |
| Client Focus – External | 15% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Roger Mulder via email at Roger.Mulder@csiro.au |
| 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 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 Scientist staff is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. The Research Scientist may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. The Research Scientist 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.

The Materials Characterisation and Modelling Program boasts analytical and characterisation expertise in areas from spectroscopy and chromatography to microscopy and X-ray science and has stewardship of over $40m of instrumentation. As part of CSIRO Manufacturing, our Materials Characterisation and Modelling Program specialises in complementary and wide-ranging analysis and characterisation fields and provides integrated expertise in chemical, physical and biological materials interrogation at the biology-materials science interface. The Program has approximately 45 scientists at Clayton VIC and 5 scientists at Lindfield NSW.

We are recruiting a research scientist to join the Molecular Interactions Team based at Clayton. You should have diverse yet complementary skills in spectroscopy, spectrometry, and chromatography, and expertise in the areas of the analysis and characterisation of organic chemicals, polymers, materials, or have experience in natural products isolation and structural elucidation.

The successful candidate will be responsible for the management and supervision of analytical laboratories. The role will require working closely with the team to enable these busy facilities to deliver high-quality characterisation expertise to internal and external clients. The role requires a high level of technical skill, adaptability, and a willingness to learn new skills and build new capabilities to ensure the high standard of our characterisation facilities. The applicant will be required to liaise with clients (internal and external), analyse samples, write reports, and contribute to or write scientific papers.

### Duties and Key Result Areas

* Work with clients of the Laboratories to provide appropriate support to ensure successful project outcomes.
* Keep records of samples received, and analyses and separations undertaken, including in laboratory notebooks and/or LIMS systems as appropriate.
* Present results in a meaningful format, prepare reports for clients and/or write scientific papers for publication.
* Undertake and complete tasks under general direction, working with discretion to decide on the timing of operations within the Laboratory’s plan, and planning ahead to meet experiment and/or project demands, often working on a number of parallel and competing tasks.
* Maintain confidentiality when dealing with commercially sensitive information.
* Perform routine maintenance on equipment, as well as fault-finding and repairs, and liaising with vendor service engineers.
* Maintain safe working practices when handling a range of chemicals and cryogenic materials.
* Independently devise and test possible solutions to resolve identified problems.
* May have responsibility for maintaining laboratory consumables and scheduling and instructing staff in the use of shared equipment.
* Oversee the activities of less experienced staff and provide guidance on experimental techniques and protocols as required.
* Respond courteously and efficiently to client requests, maintaining clear communication regarding mutual expectations and monitoring client satisfaction.
* 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 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 policies, Diversity initiatives, and Making Safety Personal goals.
* Other duties as directed.

## **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 organic or analytical chemistry, or materials science, with extensive experience in characterisation techniques.
2. Demonstrated experience in:
	1. mass spectrometry
	2. nuclear magnetic resonance spectroscopy

of organic compounds, metal-organic compounds, polymers, or materials.

1. Demonstrated experience in the determination and selection of the most appropriate analytical techniques to solve complex problems, with the ability to show how the complementary nature of the results obtained by different techniques will bring about this solution.
2. An understanding of the data produced by the various techniques and the ability to determine whether the results are expected, accurate, and correct, and to troubleshoot where they are not.
3. Demonstrated experience in the routine maintenance and ad hoc repairs and maintenance of complex scientific equipment, e.g. mass spectrometers, NMR spectrometers, chromatography systems.
4. Demonstrated knowledge of the software required to operate analytical instrumentation and to process, interpret, and assess output from these techniques. This will be a combination of vendor and third-party software.
5. Effective stakeholder management and delivery of high-quality analytical outcomes in an autonomous and timely manner.
6. Preparation of research outcomes for reports, publications and presentations which has resulted in the continuation of research.
7. Demonstrated experience in the production of standard operating procedures and training programs along with supporting technical, operational, training, and safety documentation. Experience in training new/inexperienced operators in various analytical techniques.
8. The ability to work independently and follow instructions safely. A flexible approach to problem-solving under general direction.
9. A history of working effectively as part of a multi-disciplinary, culturally diverse project team, plus the motivation and discipline to carry out autonomous research.

## **Desirable**

1. Demonstrated experience in one or more of:
	1. HPLC and UHPLC instrumentation, under reverse phase, normal phase, and chiral conditionse, including the ability to undertake method development to scale analytical separations to successful semi-preparative and preparative scale separations
	2. natural products isolation and structural elucidation
	3. analytical chemistry.
2. Experience working under a quality management system in a regulated environment, such as GLP/GMP, ISO9001, ISO17025, etc. Experience developing analytical methods and associated documentation, including design, validation, execution, and reporting.
3. Experience in safely handling cryogenics, including successful completion of cryogens and gas safety training.
4. Programming skills in Python or other appropriate environments.
5. Experience in automating and integrating sample management and dataflows to maximise laboratory efficiency.

## **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

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 - CSIRO](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