# Position Details

## Research Scientist/Engineer- CSOF5

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| The following information is for applicants | |
| Advertised Job Title | Surface Scientist |
| Job Reference | 84802 |
| Tenure | Indefinite  Full-time |
| Salary Range | AU$102,724 to AU$111,165 pa 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 Only |
| Position reports to the | Team Leader |
| Client Focus – Internal | 100% |
| Client Focus – External | 0% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Chris Easton via email at [chris.easton@csiro.au](mailto:chris.easton@csiro.au) or phone +61 3 9545 2564 |
| 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 Scientist Staff in CSIRO is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. They may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. they 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 Surface Science Facility is a core facility within the CSIRO Manufacturing Materials Characterisation Program. It combines state-of-the-art instrumentation and internationally recognised expertise to provide high level surface analysis to a wide range of projects within CSIRO Manufacturing and other Business Units. Relevant industrial applications would include biomedical materials, photovoltaics, catalysis, MOFs, carbon nanomaterials and fibres, sensors, batteries, corrosion protection, additive manufacturing, and others.

The Surface Scientist will support research and experimental activities in advanced materials research, within a multidisciplinary team characterising a broad range of materials, as well as assist in the management and operation of key surface characterisation facilities. The Surface Scientist will utilise their expertise and skills applicable to thin films & coatings technologies, 2D & 3D material architectures, physics, as well as electro-, physical, inorganic, organic & polymer chemistry, to develop and evaluate advanced materials, specifically biomedical, nanostructured, electroactive, membrane and catalytic materials, (inorganic as well as organic and polymeric).

A solid understanding of the theoretical concepts and all practical & experimental aspects of surface characterisation will be essential for this role, as well as hands-on experience with running and maintaining instrumentation. The Surface Scientist will also be required to assist in managing and running a multi-user facility.

### Duties and Key Result Areas:

* Assist in the operation, maintenance and development of key surface characterisation facilities (X-ray Photoelectron Spectroscopy, Atomic Force Microscopy).
  + Operate XPS/AFM instrumentation.
  + Provide surface analysis and related expert advice to users of the facility (internal as well as external).
  + Maintain stock of essential spare parts and consumables.
  + Carry out essential maintenance or repair jobs.
  + Maintain accurate and up-to-date records on instrument usage (log), instrument maintenance and repairs.
  + Train approved users.
* Contribute to internal and external project reporting requirements, including maintaining accurate and up-to-date records on experiments.
* Prioritise outcomes of work for the benefit of end users and clients, stakeholders, the Australian public, and the organisation. Liaise with clients to determine their needs and take personal responsibility for client satisfaction.
* Address problems promptly and in a constructive manner, selecting the most profitable lines of attack upon a problem, preparing detailed design proposals and experimental protocols.
* 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.
* 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.
* Present results in a meaningful format, prepare reports for clients and/or write scientific papers for publication. Contribute to the publishing of findings through papers, patents and oral reporting and ensure high standards of research outcomes and integrity.
* Undertake experimental research activities, often requiring the supervision and/or training of others to ensure experiments are established in accordance with research design and best practice, or as required.
* Draw on professional expertise, knowledge of other disciplines and research experience, recognise opportunities for innovation and generate new theoretical perspectives by pursuing new ideas/approaches and networking with scientific colleagues across a range of disciplines, particularly within the Materials Characterisation and Modelling Program.
* Adhere to the spirit and practice of CSIRO’s Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives, as well as the Australian Code for the Responsible Conduct of Research as implemented by CSIRO.
* Other duties as directed.

## **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 response 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 changes.

## **Selection Criteria**

#### Essential

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

1. Relevant PhD qualification in surface chemistry, materials science, or equivalent area (such as a physics, chemistry or engineering related degree), or an equivalent combination of relevant qualifications and industry experience.
2. Minimum one year of post-PhD experience in a relevant scientific role.
3. Extensive practical experience with characterisation techniques applied in surface science, specifically XPS and AFM, including demonstrated independent use and maintenance of instrumentation.
4. Demonstrated experience assisting with the operation of a multi-user facility that hosts instrumentation used in surface science and training other users on related instrumentation.
5. Demonstrated knowledge of and proficiency in relevant theoretical and practical concepts of experimentation in surface analysis, as well as data processing and evaluation, including the application of CasaXPS Surface Analysis Processing Software, and applicable international standards.
6. Well-developed written and oral communication skills.

## **Desirable:**

1. Experience in relevant fields of surface science (e.g., biomedical materials, photovoltaics and electroactive materials, catalytic materials).
2. Ability to work across multiple projects with different stakeholders at any one time.
3. Experience in software development.
4. Experience in using Scanning Electron Microscopes (SEMs) and Stylus profilometers.

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.

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* People First
* Further Together
* Making it Real
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