# Position Description

## Research Projects – CSOF3

The following information is for applicants

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| Advertised Job Title**:** | SEM Laboratory Technician (part-time) |
| Job Reference: | 60963 |
| 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: | 75% |
| Percentage of Client Focus - External: | 25% |
| Reports to the: | Team Leader Solar Materials |
| Number of Direct Reports: | 0 |
| Name and Contact Details For Applicant Enquiries | Andrew Beath via email: [andrew.beath@csiro.au](mailto:andrew.beath@csiro.au)  *Please do not email your application to Dr Beath. Applications received via this method will not be considered by the selection panel.* |
| 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.

The SEM Laboratory Technician role will primarily involve the preparation of samples (oxide solids/powders or metallic) and analysis using a scanning electron microscope coupled with an emission dispersive spectroscopy analyser (SEM/EDS) and optical microscopy. The position will ensure that the equipment and ancillary necessary for these tasks is maintained in an operational condition. The technician will assist staff in related laboratories in the use and maintenance of a broader range of analytical equipment.

This role is offered on a part-time basis completing 58.8 hours per fortnight (0.8 FTE). Hours and days to be negotiated with the successful applicant.

## Duties and Key Result Areas:

* Undertake day-to-day management of the Scanning Electron Microscope (SEM) Laboratory to ensure that the SEM and associated equipment is maintained in operational order.
* Under guidance, undertake preparation and analysis of samples using the SEM including the cutting, mounting, grinding and polishing of metal sample specimens as required.
* Analysis of metallic alloys using optical microscopy after etching with appropriate reagents as directed.
* Analyse gas samples using GC-MS.
* Assist in the testing of solar panels in the PV Performance Laboratory for commercial and internal clients.
* Assist in the maintenance and use other laboratory equipment, including provision of technical support to other laboratories (e.g. cleanroom, drylab), ordering laboratory consumables and reagents, cleaning/maintaining the Newcastle BRSN station and other tasks as required.
* Respond courteously and efficiently to client requests, maintaining clear communication regarding mutual expectations and monitoring client satisfaction.
* Undertake and complete tasks under technical direction, working with discretion to decide on the timing of operations within the work team’s plan and planning ahead to meet experiment and/or project demands.
* Under technical direction undertake experiments, laboratory analyses or technology development activities (some non-routine) using a range of techniques, often working on a number of parallel and competing tasks.
* Oversee the activities of less experienced staff and provide guidance on experimental/ technological techniques and protocols.
* Design new processes or apparatus by adapting existing techniques and components to meet special circumstances or undertake modifications to methods requiring some innovation.
* 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, 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.
* Develop and maintain excellent laboratory housekeeping standards.
* Other duties as directed.

## Competencies:

1. **Teamwork and Collaboration: Proactively seeks and considers the ideas and opinions of others from within and outside the team to help form decisions, plans or actions.**
2. **Influence and Communication: Puts forward ideas by presenting factual information supported by data, definitions, examples, illustrations or other aids, which will assist in conveying meaning.**
3. **Resource Management/Leadership: Provides instruction and assists other staff to complete allocated tasks and activities.**
4. **Judgement and Problem Solving:** Identifies and considers the implications of a range of available alternatives in order to select the most appropriate response to problems of a familiar or recurring nature.
5. **Independence: Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).**
6. **Adaptability:** Willingness to change ideas or perceptions based on new information, contrary evidence or other people's points of view. Prepared to try out different approaches.

## Selection Criteria:

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

1. Relevant trade certificate/diploma/bachelor’s degree or relevant work experience in Metallurgy, Metallography, Materials Science or related disciplines.
2. At least 12 months’ experience in preparation of samples for and analysis using a SEM, coupled with an understanding of methods for cutting, mounting, polishing and/or etching of metallic samples
3. Demonstrated capability to perform precise and reproducible laboratory work.
4. A commitment to maintaining a safe laboratory environment.
5. A history of professional and respectful behaviours and attitudes in a collaborative environment including the ability to work effectively as part of a team, and carry out tasks under general direction from Scientific Researchers.

## Desirable Criteria:

1. Experience using operation and maintenance of a GC-MS and other analytical equipment.
2. Experience managing a laboratory.
3. Familiarity with the theoretical fundamentals of metallography using sample preparation methods suiting a wide range of materials.
4. Familiarity with XRD analysis methods.

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