# Position Details

## Research Projects- CSOF4

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| The following information is for applicants |
| Advertised Job Title | Experimental Scientist – XRF |
| Job Reference | 90436 |
| Tenure | Indefinite |
| Salary Range | AU$89,680 to AU$101,459 pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Adelaide (Waite Campus) SA |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * Australian/New Zealand Citizens and Australian Permanent Residents Only
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| Position reports to the | Research Team Leader |
| Client Focus – Internal | 20% |
| Client Focus – External | 80% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Dr Rong Fan via email at Rong.Fan@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 Projects staff in CSIRO is to collaborate 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 Experimental Scientist – XRF will be a member of the Diffraction, Mineralogy and Geochemistry team of the CSIRO Mineral Resources (CMR) Characterisation Program. The program delivers high quality and accurate information to improve understanding of mineral resources across the minerals value chain, from exploration to processing. The range of state-of-the-art analysis and characterisation capability includes X-ray fluorescence spectroscopy, X-ray diffraction, electron/optical microscopy, electron probe microanalysis, QEMSCAN, particle size analysis and high-resolution X-ray computed tomography.

As part of the team, the Experimental Scientist \_XRF will have two main roles:

1. Deliver X-ray Fluorescence (XRF) characterisation in a wide range of mineral contexts.

Drive the application and development of high-level analytical science. The position will provide characterisation consulting services for external and internal stakeholders.

2. Manage an International Proficiency Test for Chemical Analysis of Iron Ores.

Coordinate the preparation and distribution of samples for up to 80 laboratories worldwide on a two-monthly basis. Collate and assess the received data using existing statistical software and communicate results to participants to enable them to assess their analytical performance. Report to an ISO (International Standards Organisation) advisory group on the state of the international iron ore industry in chemical analysis.

### Duties and Key Result Areas

* Deliver XRF-based characterisation services through development of methods and calibrations, data analysis and reporting, to external and internal customers across a wide range of mineral contexts.
* Contribute to the maintenance of a world-class characterisation laboratory, and development and application of specialised X-ray analysis techniques.
* Take on custodianship responsibilities of a laboratory housing multiple X-ray spectrometers and sample preparation equipment.
* Follow safe work practices when working with chemicals, hazardous materials, and scientific equipment.
* Communicate the outcomes of consulting/service work through reports and liaise with customers to ensure their satisfaction.
* Coordinate the preparation and distribution of samples for up to 80 laboratories worldwide on a two-monthly basis. Collate and assess the received data using existing statistical software and communicate results to participants within established timeframes to enable them to assess their analytical performance against other laboratories.
* Draft customer agreements and arrange invoices as required.
* Be involved in CSIRO Research Project teams and deliver impact to research projects through high quality analytical science.
* Communicate the outcomes of project and/or research work through publications in relevant scientific journals, and through presentation of results at conferences.
* Contribute to the business development activities of the team through identification of new avenues of business, customer/stakeholder interactions, preparation of proposals and design, and execution and delivery of work programs.
* Allocate activities, direct tasks for junior staff, and manage resources to meet objectives.
* Foster open communication, provide coaching and on-the-job training to both support and research colleagues, as required, and provide recognition and acknowledgement for staff achievements.
* Adapt and/or develop original experimental methods/equipment/software/concepts/ideas in support of existing and further research.
* Maintain confidentiality when dealing with commercially sensitive information.
* 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.
* Adhere to the spirit and practice of CSIRO’s Values, Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives and Making Safety Personal goals.
* 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:** Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).
* **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 Bachelors or Masters Degree or equivalent relevant work experience in Analytical Chemistry, Geochemistry, Physics, Materials Science, Minerals/Minerals Processing or Mineralogy.
2. Demonstrated experience in collection and analysis of XRF data for minerals characterisation in a research (or similar) environment.
3. Strong experience in sample preparation for XRF (e.g., using fused bead, powder and/or liquid samples).
4. Experience in the management of scientific equipment and tailoring data collection and analysis approaches to solve specific problems.
5. Demonstrated ability to liaise with customers and/or colleagues to establish their characterisation requirements and ensure customer satisfaction and carry out tasks autonomously in support of scientific research.
6. Demonstrated ability to set and manage schedules and ensure that others also adhere to deadlines.
7. Demonstrated strong communication skills and the ability to work effectively as part of a multi-disciplinary, regionally dispersed team.
8. Demonstrated ability & willingness to contribute novel ideas and approaches in support of scientific investigations.

## **Desirable**

1. Demonstrated experience in establishing and modifying XRF calibrations.
2. Demonstrated understanding of the theory of XRF.
3. Understanding of statistics and outlier tests.
4. Experience in Visual Basic and/or other programming languages.
5. Understanding and appreciation of the role of Australian Standards (AS) and International Standards Organisation (ISO) Standard methods for international harmonisation.

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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CSIRO is a values-based organisation.  In your application and at interview you will need to demonstrate behaviours aligned to our values of:

* 1. People First
	2. Further Together
	3. Making it Real
	4. Trusted

Find out more about CSIRO [Mineral Resources](https://www.csiro.au/en/Research/MRF)