# Position Details

## Research Scientist/Engineer- CSOF7

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| The following information is for applicants | |
| Advertised Job Title | Principal Research Scientist/ Engineer – Critical Minerals |
| Job Reference | 86464 |
| Tenure | Indefinite  Full-time |
| Salary Range | AU$141,949 - AU$157,055 per annum (pro-rata for part-time)  plus up to 15.4% superannuation |
| Location | Perth, Western Australia |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * All Candidates |
| Position reports to the | Research Group Leader: Hydrometallurgy |
| Client Focus – Internal | 60% |
| Client Focus – External | 40% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Keith Barnard via email at keith.barnard@csiro.au or phone +61 8 9334 8071 |
| 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).

**About the CSIRO Mineral Resources (CMR) Business Unit**

We are one of the largest minerals R&D groups in the world, with ~350 employees, and a proud track record of supporting industrial innovation across the minerals value chain.

We apply our expert knowledge and specialised research to deliver technologies and solutions that solve complex and challenging problems faced by minerals companies, METS companies (mining equipment, technology, and services), governments, and other industry stakeholders.

Our R&D is targeted at growing Australia's mineral resource base, increasing the global competitiveness of the Australian minerals industry, and driving social and environmental performance across the global minerals industry.

The Business Unit is currently comprised of six research programs (Discovery, Characterisation, Sustainable Mining Technologies, Hard Rock Mining, Sensing and Sorting, and Processing), with major facilities in Perth, Brisbane, Melbourne, and Sydney.

**About CMR’s Processing Program**

We are one of the largest mineral processing R&D programs in the world, with ~100 employees, and a long and proud history of undertaking world class R&D with a very strong focus on commercial benefit via implementation of technological innovation and know-how. The program is currently at the forefront of R&D efforts to decarbonise the minerals industry (notably via ‘green iron ore and steel’) and to ‘unlock’ Australian critical mineral resources in support of the global energy transformation.

The Program currently operates three Groups. These are based in Melbourne (Process Engineering and Chemistry: electrochemistry and process engineering focus), Perth (Hydrometallurgy: hydrometallurgy and critical minerals focus) and Brisbane (Carbon Steel Materials: carbon steel materials focus).

The Program manages a project portfolio delivering direct industry impacts now, but is also increasingly seeking and creating potential opportunities for larger impacts for CSIRO and the nation, in turn delivering more consistent financial returns to CMR in the future. In addition to industry impact and responding to the current technical challenges noted above, other definitive drivers of Program growth announced by the Australian Government during the last year (along with significant Government funding) were the creation of:

* the National Critical Minerals Centre.
* the India-Australia Critical Minerals Research Partnership.
* the India-Australia Green Steel Partnership.

### Role Overview

The role of Senior Research Scientist/Engineer will suit an enthusiastic and established mid-career individual to conduct innovative research leading to scientific achievements that are aligned with Program strategies. Working closely with existing staff, you will engage in scientific activity ranging from fundamental research to the investigation of specific industry challenges. You will play a lead role in providing scientific leadership and pursuing new ideas and approaches that create new commercial opportunities in hydrometallurgical processing. In particular, you will leverage your status as a researcher (publications, citations, postgraduate completions and existing academic/research network) to deliver growth in postdoctoral fellows actively engaged in hydrometallurgical research relevant to critical minerals (e.g. lithium, nickel, cobalt, graphite, high purity alumina) through pathways internal and external to CSIRO.

### Duties and Key Result Areas

* Set project goals within the Business Unit’s research direction and manage the delivery of project outcomes.
* Undertake leading edge scientific research and maintain active research collaborations to access/share leading edge concepts and technology to thereby advance project goals.
* Progress complex, sensitive or contentious research matters to finality.
* Lead the strategic research component of projects, contribute original ideas and concepts and determine the most appropriate strategies to achieve project goals.
* Possess knowledge across a range of scientific disciplines.
* Lead and/or participate in a number of projects simultaneously (including multi-disciplinary or multi-Business Unit projects).
* Maintain active national and/or international research collaborations in order to access/share leading edge concepts and technology to advance projects.
* Liaise with the business manager and/or account managers to assess commercial opportunities and to protect intellectual property.
* Utilise knowledge and understanding of clients’ business and demonstrate creativity in anticipating client needs.
* Provide scientific or engineering leadership to colleagues and students and coordinate, allocate and manage resources (people, equipment, facilities, and funds).
* Undertake feasibility studies, demonstrating a considerable degree of originality, creativity and innovation in solving problems and introducing new directions and approaches.
* Communicate research results to clients and the scientific community through oral and written reports, which may include the preparation of documents for patent applications.
* 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 (and often leading) multi-disciplinary research teams that may be regionally dispersed 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 Zero Harm 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 field relevant to hydrometallurgy, such as chemistry or chemical engineering.
2. Demonstrated ability to undertake original, creative and innovative research by generating and pursuing novel ideas and solutions to scientific research problems, particularly in the hydrometallurgical space.
3. Excellent mineral industry and innovation ecosystem networks.
4. Demonstrated ability to secure and mentor a team of talented postdoctoral fellows and postgraduate students, along with existing early career researchers.
5. Be recognised by their peers as making a significant contribution in their field of science or engineering.
6. A demonstrated strong history of authorship on scientific papers in peer reviewed journals and/or reports, grant applications or inventorship on patent applications.

## **Desirable**

1. Experience working within (or closely associated with) the minerals industry in any R&D or innovation leadership role.
2. Direct relevant experience with the science and/or production of critical minerals.
3. Have a track record of translating scientific outcomes into impact.
4. Experience with establishing and maintaining domestic and international partnerships with industrial and academic institutions.
5. Demonstrate the ability to collaborate at the intersection of disciplines.

## **Required Competencies**

* **Teamwork and Collaboration:** Creates and fosters an environment in which there is a high level of cooperation within and between teams. Facilitates positive team relationships to build interactions across Business Units and the organisation.
* **Influence and Communication:** Identifies critical stakeholders and influences them via an influential third party, for example through an established network, to gain support for sometimes contentious proposals/ideas.
* **Resource Management/Leadership:** Provides leadership that fosters an environment that encourages new ideas and provides support for the development of emerging skills. Creates trust by displaying consistency, understanding, integrity and patience. Plans, seeks, allocates and monitors resources to achieve outcomes.
* **Judgement and Problem Solving:** Resolves major conceptual scientific, technical, commercial or management problems, which have a significant impact upon the field of research, professional function, the Business Unit or the Organisation. Situations faced have little or no precedent and require original concepts and approaches.
* **Independence:** Assesses the risk and opportunity of identified strategies, options and actions. Overcomes problems and setbacks in achieving goals. Invariably includes consideration of value-added future impact on bottom line when determining the optimal and efficient use of resources.
* **Adaptability:**Is flexible in response to external change or when faced with external constraints. Identifies and promotes the opportunities arising as a result of change.

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 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 [Mineral Resources](https://www.csiro.au/en/Research/MRF) 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