

Postdoctoral Research Fellow – Fingerprinting sustainable ores

Position Number	6000021971
Division/College	Academy / College of Science and Engineering
Campus Location	Townsville
Classification	Academic Level A
Fraction	100%
Reports To	DECRA Researcher
Supervisor Position Number	6000020378
Number of positions supervised	Directly: 0
Date Last Reviewed	November 2022

Position Overview

The Postdoctoral Research Fellow will undertake research focused on isotopically fingerprinting a range of rare earth element ores and their concentrates to quantify the effects of different sustainable extraction techniques on their isotopic compositions. Working in collaboration with Earth and Environmental Sciences researchers and external collaborators/partners, the Postdoctoral Research Fellow will conduct research, develop and/or contribute to research publications as a member of a high performing team and ensure all key research outcomes and milestones are achieved in alignment with project timelines.

The ambition to establish a strong research portfolio, as well as capacity to contribute to the growth of the Isotopics Geochemistry Laboratory and the University's EES group are also inherent requirements of the position.

Organisational Charts

[James Cook University](https://www.jcu.edu.au/)

Principal Accountabilities

1. Undertake experiments and measurements to generate the isotope data required to complete the project.
2. Synthesis and interpret the isotope data and compile a range of reports, and write publications detailing the results.
3. Actively collaborate with researchers at other institutions, and other key stakeholders involved in the project to drive the project forward.

4. Publication of research findings in high quality journals.
5. Contribute to the Isotropics Geochemistry Laboratory, and broader Earth Sciences group through participation in activities as directed.
6. Enhance the visibility and reputation of JCU through active participation in public outreach activities as an individual and through participation in events organized by JCU.
7. Support the University's commitment to the principles of [reconciliation](#), which exemplify respect for Aboriginal and Torres Strait Islander heritage and the valuing of justice and equity for all Australians.
8. Demonstrate a commitment to the University values.
9. Support the principles of the TropEco program and engage in commitment to JCU sustainability goals and objectives.

Generic Accountabilities

There are generic responsibilities that apply to all James Cook University staff.

1. The ***Postdoctoral Research Fellow*** is required to observe the lawful and reasonable directions, policies and decisions of the University Council, understand and comply with the Enterprise Agreement, the Statutes and Rules of the University, the policies and decisions of the University Council and other appropriate University authorities, as in force from time to time.
2. The ***Postdoctoral Research Fellow*** is required to demonstrate a personal commitment to ensure personal safety and the safety of others and contribute to the continuous improvement of our WHS performance. This includes the effective implementation and compliance with James Cook University WHS policies, procedures and safe systems of work, together with all relevant legislation, duties and obligations. Contribute to the continuous improvement of our WHS performance.
3. The ***Postdoctoral Research Fellow*** is required to exercise proper discretion in all matters affecting the well-being of the University which involve public writing or speaking in accordance with the University's [Code of Conduct](#).

Selection Criteria

Selection and appointments will be assessed against selection criteria.

Essential

1. A PhD qualification or equivalent in Geochemistry, Geology or related discipline.
2. Demonstrated experience in the field of isotope geochemistry.
3. A proven track record in research publication.

Desirable

1. Experience in solution-based isotope geochemistry applied to either non-conventional stable isotopes (Cu, Fe, Zn, etc.) and/or radiogenic isotope systems (Sr, Nd, etc.), as well as knowledge of the principles of isotope spiking.
2. Knowledge of rare earth elements, including their behaviour and mobility in any of the following systems: ore deposits, magmas, weathering profiles and hydrothermal fluids.