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## Fully funded PhD project available in Geochemistry at JCU

### The Place

We are seeking several enthusiastic and highly motivated students to undertake a fully funded PhD project in geochemistry. Ideally candidates will have a background in geoscience and a strong theoretical understanding of geochemistry. Previous experience in clean laboratory geochemistry and/or mass spectrometer experience, will be advantageous although having all these skills is not essential. The candidates will be based at James Cook University in Townsville, Australia, and will have access to the Advanced Analytical Centre at JCU which contains a suite of world-class research facilities including XRD, XRF, SEM, LA-ICP-MS, TQ-ICP-MS and MC-ICP-MS and a recently installed FE-EPMA and anaerobic chamber. The successful applicants will join a vibrant cohort of existing PhD candidates and will be able to interact with researchers from both the IsoTropics Geochemistry Laboratory and the Economic Geology Research Centre (EGRU).

### The Project

#### **Tracking temporal variations in the Hamersley Group Banded Iron Formations insights from radiogenic and stable isotope compositions.**

Sustained continental emergence (i.e. above sea-level) was a pivotal moment in Earth's history, however, this process remains poorly constrained. This PhD project will involve detailed geochemical analysis of a comprehensive suite of BIF assembled from all BIF horizons within the 2.63-2.42 Ga Hamersley Group, Western Australia. It will involve extensive clean laboratory and MC-ICP-MS work. The main aims will be to: 1) using sequential leaching techniques determine the trace element distribution between the main phases (e.g. oxides, silicates, carbonates); and 2) construct a Sr-Nd-Fe (both stable and radiogenic) isotope record from this important reference suite.

### The Details

Candidates should submit to "alex.mccoywest@jcu.edu.au" a complete CV (including academic transcripts) and a letter containing the following information - motivation for applying, research interests and experience, and the name and contact details of two or more academic referees. Please do not hesitate to contact me for further information.

This opportunity is independent of normal JCU application deadlines. Applications received on or before **31<sup>st</sup> August 2024** will be considered, although the positions will remain open until filled. Ideally successful applicants will be available to start no later than the February-March 2025.

Dr Alex McCoy-West  
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