RESEARCH FELLOW

DEPARTMENT/UNIT	School of Earth, Atmosphere and Environment
FACULTY/DIVISION	Faculty of Science
CLASSIFICATION	Level A
DESIGNATED CAMPUS OR LOCATION	Clayton campus

ORGANISATIONAL CONTEXT

Everyone needs a platform to launch a satisfying career. At Monash, we give you the space and support to take your career in all kinds of exciting new directions. You'll have access to quality research, infrastructure and learning facilities, opportunities to collaborate internationally, as well as the grants you'll need to publish your work. We're a university full of energetic and enthusiastic minds, driven to challenge what's expected, expand what we know, and learn from other inspiring, empowering thinkers. Discover more at www.monash.edu.

The five Schools of the **Faculty of Science** offer a large and diverse range of disciplines in undergraduate and postgraduate courses. Ten Schools from other university faculties contribute to science teaching at all levels, allowing students to choose their studies from physical, biological, biomedical, behavioural, environmental, mathematical and computer sciences. The Faculty of Science has a strong research reputation. The Faculty's research spans the theoretical to the applied, contributes to new knowledge and technologies, and challenges how we interact with the world. To learn more about the Faculty of Science, please visit www.monash.edu/science.

Through leadership in research and education, the **School of Earth, Atmosphere and Environment** aims to find environmental solutions for society and the planet. The school is located in the Faculty of Science (www.monash.edu/science/schools/earth-atmosphere-environment) and has close collaborations with Biology, Chemistry, Mathematics and Physics, and with other Faculties, such as Arts (involving co-delivery of the undergraduate Geography programme), Business and Economics, and Engineering. The School has strong links with outside institutions such as Federal and State Government agencies, Catchment Management Authorities, CSIRO, the Bureau of Meteorology, the Australian Antarctic Division, and Geoscience Australia as well as a large number of research institutes and universities globally. Physical Geography at Monash has a long history of excellence in the fields of Climate Impacts and Adaptation, Coastal Science, Environmental Geochemistry, Glaciology, Hydrogeology Geomorphology, Soil Science, Urban

Climates, GIS, Paleoclimate, and Remote Sensing. The school also hosts very active groups in Atmospheric/Climate Sciences, and Geosciences. The school is a major node of the ARC Centre of Excellence in Climate Extremes (CLEX), and Securing Antarctica's Environmental Future (SAEF), an ARC Special Research Initiative in Excellence in Antarctic Science. Facilities include infrastructure to support fieldwork, and world class geochemistry laboratories for elemental, stable isotope, and radioisotope analysis of waters, soils and environmental materials, environmental DNA, a preparation laboratory for terrestrial cosmogenic nuclides. The School hosts the Monash Drone Discovery Platform, and groups within the school have established collaborations with the National Computational Infrastructure, and the Australian Synchrotron (located adjacent to Monash Clayton).

POSITION PURPOSE

A Level A research-only academic is expected to contribute towards the research effort of the University and to develop their research expertise through the pursuit of defined projects relevant to the particular field of research.

The Research Fellow will join a multi-disciplinary team of academic and industry stakeholders across Australia, the United Kingdom, the United States and Canada who aim to sequester carbon dioxide and recover critical metals through the enhanced weathering of mine tailings. The position will be based at Monash University and work closely with the Australian Synchrotron to characterise mine tailings and weathering products, design reactors for metal leaching and recovery, and to assist with the operation of a pilot-plant operating on an active mine site.

Reporting Line: The position reports to a senior academic within the School of Earth, Atmosphere and Environment

Supervisory Responsibilities: Not applicable

Financial Delegation: Not applicable

Budgetary Responsibilities: Not applicable

KEY RESPONSIBILITIES

Specific duties required of a Level A research-only academic may include:

1. Design and execute laboratory-based geochemistry experiments for the enhanced weathering of mine tailings and critical metal recovery under limited supervision either as a member of a team or independently
2. Analyse minerals, rocks and aqueous samples using in-house instrumentation (ICPMS, SEM) and shared user facilities (synchrotron-based spectroscopy, diffraction and mapping)
3. Publish peer-reviewed manuscripts and industry reports from research results
4. Travel domestically and/or abroad for fieldwork and meetings with collaborators
5. Co-supervise PhD and undergraduate students within the research group
6. Develop proposals for competitive access to the Australian Synchrotron and/or international facilities
7. Attend regular meetings within the school and research group
8. Other duties as directed from time to time

KEY SELECTION CRITERIA

Education/Qualifications

1. The appointee will have:

- A PhD or equivalent degree in geochemistry, geomicrobiology, environmental science, chemistry, (geo)metallurgy or an aligned engineering field.

Knowledge and Skills

2. Sound knowledge and research experience in modern laboratory methodologies, including benchtop aqueous chemistry and materials characterization techniques (e.g. SEM, XRD, ICPMS, synchrotron-based techniques)

3. Excellent communication skills as evidenced by a track record of refereed research publications, presentations or other written works

4. Ability to solve complex problems by using discretion, innovation and diagnostic skills and/or expertise

5. Well-developed planning and organisational skills, with the ability to prioritise multiple tasks and set and meet deadlines

6. A demonstrated awareness of the principles of confidentiality, privacy and information handling

7. A demonstrated capacity to work collaboratively with other staff in the workplace

8. Demonstrated computer literacy and proficiency in the production of high-level work using software such as Microsoft Office applications and specified University software programs, with the capability and willingness to learn new packages as appropriate

OTHER JOB RELATED INFORMATION

- Travel to other campuses of the University may be required
- There may be a requirement to work additional hours from time to time
- There may be peak periods of work during which taking of leave may be restricted

GOVERNANCE

Monash University expects staff to appropriately balance risk and reward in a manner that is sustainable to its long-term future, contribute to a culture of honesty and integrity, and provide an environment that is safe, secure and inclusive. Ensure you are aware of and adhere to University policies relevant to the duties undertaken and the values of the University. This is a standard which the University sees as the benchmark for all of its activities in Australia and internationally.