



RESEARCH FELLOW

DEPARTMENT/UNIT	Department of Chemical Engineering
FACULTY/DIVISION	Faculty of Engineering
CLASSIFICATION	Level A
CAMPUS OR DESIGNATED 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 **Faculty of Engineering** is one of the largest in Australia, renowned worldwide for the quality and calibre of our teaching, research and graduates. We offer a comprehensive range of undergraduate, graduate, postgraduate and higher degree by research programs in a wide range of engineering disciplines. Our research activities provide a platform for establishing a thriving educational enterprise and our staff are committed to creating a dynamic learning environment. The research activities range from fundamental studies to research with a strong applications orientation. To learn more about the Faculty of Engineering, [please visit our website](#).

The **Department of Chemical Engineering** is very active in both undergraduate teaching and postgraduate research and has an international reputation for its quality research programs and postgraduate training. The objectives of the Department are to provide high quality programs in Chemical Engineering for undergraduate and postgraduate students as well as undertaking and publishing high quality research. For more information about us and the work we do, please visit our website.

The **ARC Centre of Excellence in Exciton Science** is a research centre which has nodes at Monash University, University of Melbourne, RMIT, University of Sydney and UNSW. More information about the ARC Centre of Excellence in Exciton Science can be found at www.excitonscience.com.

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 ARC Centre of Excellence in Exciton Science is a multi-disciplinary and multi-institutional research centre working to understand, examine and manipulate the way light energy is absorbed, transported and transformed

in advanced molecular materials. The role is within a multidisciplinary, diverse team within the 'Solar Energy Conversion research platform 1.2 (Solution-Processed Next Generation Photovoltaics).

The Research Fellow will work with a team, typically a number of researchers from different institutions, to implement and apply combinatorial and high-throughput concepts to the field of materials discovery with the aim of developing novel photo absorbers. The expectation will be to work collaboratively across the ARC Centre nodes and research areas as defined in the research specifications in this document.

Reporting Line: The position reports to Professor Udo Bach (CI) under broad direction

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. The conduct of research under limited supervision, in synthesis, thin film growth, spectroscopy, thin film photovoltaics (ideally perovskite solar cells), either as a member of a team or, where appropriate, independently and the production or contribution to the production of conference and seminar papers and publications from that research
2. Involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise
3. Development of a limited amount of research-related material for teaching or other purposes with appropriate guidance from other staff
4. Occasional contributions to teaching in relation to their research project(s)
5. Experimental design and operation of advanced laboratory and technical equipment or conduct of advanced research procedures such as; assist the team in setting up an experimental high-throughput materials screening facility; assistance with process automation, data analysis, visualization and archiving; implementation of machine learning concepts and experimental design
6. Attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental, school and/or faculty meetings and/or membership of a limited number of committees
7. Advice within the field of the staff member's research to postgraduate students.
8. Limited administrative functions primarily connected with the area of research of the academic
9. Other duties as directed from time to time

KEY SELECTION CRITERIA

Education/Qualifications

1. The appointee will have:
 - A doctoral degree in the relevant discipline (chemistry, chemical engineering, materials science & engineering, physics, robotics or data science) or equivalent qualifications or research experience

Knowledge and Skills

2. Knowledge and hands-on experience in chemical synthesis, thin film semiconductor growth, spectroscopy, thin film photovoltaics (ideally perovskite solar cells) and experience or strong interest in experimental high-throughput concepts, data visualization and data analysis

3. Demonstrated analytical and manuscript preparation skills; including a track record of refereed research publications
4. Ability to solve complex problems by using discretion, innovation and the exercise 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. Excellent written communication and verbal communication skills with proven ability to produce clear, succinct reports and documents
7. A demonstrated awareness of the principles of confidentiality, privacy and information handling
8. A demonstrated capacity to work in a collegiate manner with other staff in the workplace
9. 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.