



POSITION DESCRIPTION

Academic Positions

(In addition to the Position Classification Standards)

Position Title: Auto CRC Research Fellow on lithium ion batteries

Level: A/B

Faculty/Division: AIIM

Department/Location: ISEM

Primary Purpose of the Position:

The appointee will play a critical role in delivering key research milestones as set by Auto CRC electrification program. The successful candidate will be heavily involved in development of novel materials for lithium ion batteries, with strong impetus on applications in automotive sector. He/she will actively participate in postgraduate student supervision, equipment maintenance, delivery of high level publications and dissemination of results through participation in top class conferences.

The candidate will be expected to establish a vigorous research program that complements and enhances ISEM's expertise in battery materials, initiate new and strengthen existing collaborative research efforts within University of Wollongong and external stakeholders. He/she will be expected to contribute significantly to the deployment of battery manufacturing line, as a result of successful ARC LIEF project.

Position Environment:

ISEM seeks to stimulate the technological and commercial development to advance technologies including batteries for electric vehicles and energy storage; applied superconductivity for electrical and medical devices; energy conversion and transmission; spintronic and electronic materials for applications; terahertz science; and nano structured materials.

The Institute is located at the Australian Institute for Innovative Materials, at the University of Wollongong's Innovation Campus, Australia's first multifunctional materials facility that has the capacity to develop the processes and devices needed to scale-up lab-based breakthroughs in preparation for commercialisation. ISEM has extensive infrastructure, with close to 20 specialized laboratories, including some of the top of the line scientific equipment such as scanning tunnelling microscopes, battery testing and management systems, single crystal growth equipment, and magnetic/electric properties measurement systems.

ISEM has been extremely successful in attracting competitive research funding from Australian Research Council and other funding agencies. It has substantially contributed to overall publications and citations at the university for a number of years. With more than 60 PhD students, ISEM is one of the main hubs in postgraduate student training at UOW.

Major Accountabilities/Responsibilities:

Responsibilities		Outcome	Office Use Only
1.	Contribute to the development of novel lithium ion battery materials for electrical vehicles as well as research activities in related areas.	Completion of assigned research project assessed in terms of publications, generation of IP.	
2.	Collaboration with industry partners, internal and external stakeholders.	Improved deliverables directly related to the project. Establishment of new partnerships and links. Securing internal and external funding.	
3.	Postgraduate Students Supervision	Successful completions of PhD programs.	
4.	Observe principles and practices of Equal Employment Opportunity	To ensure fair treatment in the workplace	
5.	Have OH&S responsibilities, accountabilities and authorities as outlined in the OHS Roles and Responsibilities Document	To ensure a safe working environment for self & others	

Reporting Relationships:

Position Reports to:	<u>Professor S. X. Dou</u>
The position supervises the following positions:	PhD students
Other Key Contacts:	<u>Other related ISEM personnel</u>

Key Relationships:

Contact/Organisation:

List of collaborators if available:

ISEM academic staff

Purpose & Frequency of contact

Purpose of such collaborations

Joint research programs, external funding bids

Key Challenges:

1. To be a world class scientist in rapidly transforming and expanding research field. To be up to date with latest developments in the field.
2. To deliver outcomes of highest merits with potential commercialization prospects and to maintain research productivity with large number of publications in high impact factor journals.
3. To secure national competitive grants (ARC Discovery and Linkage)
4. To provide excellent postgraduate student training and guidance.
5. To help maintain an enthusiastic and productive collegial environment.

SELECTION CRITERIA - Knowledge & Skills:

Essential:

- Strong background and knowledge in electrochemistry and materials science
- Extensive experience in lithium ion battery research
- Throughout knowledge of concepts of lithium ion batteries for electrical vehicles
- Outstanding analytical skills.

SELECTION CRITERIA - Education & Experience:

Essential:

- PhD in materials engineering, chemistry, or physics
- Demonstrated research experience

Desirable:

- Demonstrated experience in dealing with industrial partners or industry oriented research, in particular in automotive sector

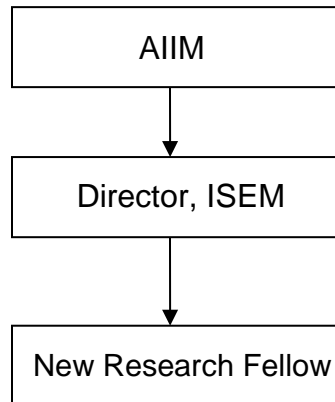
Personal Attributes:

- Excellent time management skills
- Excellent interpersonal skills
- Outstanding written and oral communication skills
- High level of motivation and initiative
- Ability to work under supervision and independently

Special Job Requirements:

May be required to perform duties as equipment or laboratory supervisor, undergo/provide trainings if necessary.

Organisational Chart:



Approval:

Approved by Head of Unit: _____

Date: _____

Approved by Personnel: _____

Date: _____



POSITION DESCRIPTION

Academic Positions

(In addition to the Position Classification Standards)

Position Title: Auto CRC Research Fellow on lithium air batteries

Level: A/B

Faculty/Division: AIIM

Department/Location: ISEM

Primary Purpose of the Position:

The appointee will play a critical role in delivering key research milestones as set by Auto CRC electrification program. The successful candidate will be heavily involved in development of novel lithium air batteries, with strong impetus on applications in automotive sector. He/she will actively participate in postgraduate student supervision, equipment maintenance, delivery of high level publications and dissemination of results through participation in top class conferences. This position will be shared between University of Wollongong and University of Technology, Sydney.

The candidate will be expected to establish a vigorous research program that complements and enhances ISEM's expertise in battery materials, initiate new and strengthen existing collaborative research efforts within University of Wollongong and external stakeholders. He/she will be expected to contribute significantly to the deployment of battery manufacturing line, as a result of successful ARC LIEF project.

Position Environment:

ISEM seeks to stimulate the technological and commercial development to advance technologies including batteries for electric vehicles and energy storage; applied superconductivity for electrical and medical devices; energy conversion and transmission; spintronic and electronic materials for applications; terahertz science; and nano structured materials.

The Institute is located at the Australian Institute for Innovative Materials, at the University of Wollongong's Innovation Campus, Australia's first multifunctional materials facility that has the capacity to develop the processes and devices needed to scale-up lab-based breakthroughs in preparation for commercialisation. ISEM has extensive infrastructure, with close to 20 specialized laboratories, including some of the top of the line scientific equipment such as scanning tunnelling microscopes, battery testing and management systems, single crystal growth equipment, and magnetic/electric properties measurement systems.

ISEM has been extremely successful in attracting competitive research funding from Australian Research Council and other funding agencies. It has substantially contributed to overall publications and citations at the university for a number of years. With more than 60 PhD students, ISEM is one of the main hubs in postgraduate student training at UOW.

Major Accountabilities/Responsibilities:

Responsibilities		Outcome	Office Use Only
1.	Contribute to the development of novel lithium air batteries: novel materials, techniques and architectures.	Completion of assigned research project assessed in terms of publications, generation of IP.	
2.	Collaboration with industry partners, internal and external stakeholders.	Improved deliverables directly related to the project. Establishment of new partnerships and links. Securing internal and external funding.	
3.	Postgraduate Students Supervision	Successful completions of PhD programs.	
4.	Observe principles and practices of Equal Employment Opportunity	To ensure fair treatment in the workplace	
5.	Have OH&S responsibilities, accountabilities and authorities as outlined in the OHS Roles and Responsibilities Document	To ensure a safe working environment for self & others	

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Key Challenges:

1. To be a world class scientist in rapidly transforming and expanding research field. To be up to date with latest developments in the field.
2. To deliver outcomes of highest merits with potential commercialization prospects and to maintain research productivity with large number of publications in high impact factor journals.
3. To secure national competitive grants (ARC Discovery and Linkage)
4. To provide excellent postgraduate student training and guidance.
5. To help maintain an enthusiastic and productive collegial environment.

SELECTION CRITERIA - Knowledge & Skills:

Essential:

- Strong background in electrochemistry and materials science.
- Extensive experience in lithium ion battery research, in particular in lithium air batteries.
- Thorough understanding of clean energy requirements for automotive industry.
- Outstanding analytical skills.

SELECTION CRITERIA - Education & Experience:

Essential:

- PhD in materials engineering, chemistry, or physics
- Demonstrated research experience

Desirable:

- Demonstrated experience in dealing with industrial partners or industry oriented research, in particular in automotive sector

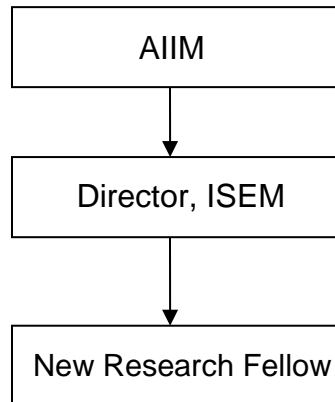
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- Ability to work under supervision and independently

Special Job Requirements:

May be required to perform duties as equipment or laboratory supervisor, undergo/provide trainings if necessary.

Organisational Chart:



Approval:

Approved by Head of Unit: _____

Date: _____

Approved by Personnel: _____

Date: _____



POSITION CLASSIFICATION STANDARD - Research Only

Level: A
Title: Associate Fellow

Description

A position classification standard describes the broad categories of responsibility attached to research-only academic staff at different levels. The standards are not exhaustive of all tasks in research-only academic employment, which is by its nature multi-skilled and involves an overlap of duties between levels. The standards provide an adequate basis to differentiate between the various levels of employment and define the broad relationships between classifications.

Progression through an academic career will normally be based on research, teaching, administrative functions and contribution to the profession. The balance of functions will vary according to level and position over time. It is only in exceptional circumstances that promotion would be solely on the research only position classification standards.

- General Standard
- Specific Duties
- Skill Base

General Standard

A Level A research-only academic is expected to contribute towards the research effort of the institution, and to develop her/his research expertise through the pursuit of defined properties relevant to the particular field of research.

Specific Duties

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

- The conduct of research under limited supervision 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.
- Involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise.
- Limited administrative functions primarily connected with the area of research of the academic.
- Development of a limited amount of research-related material for teaching or other purposes with appropriate guidance from other staff.
- Occasional contributions to teaching in relation to his/her research project(s).
- Experimental design and operation of advanced laboratory and technical equipment or conduct of advanced research procedures.
- Attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental and/pr faculty meetings and/or membership of a limited number of committees.
- Advice within the field of the staff member's research to postgraduate students.
- A Level A research-only academic shall work with support, guidance and/or direction from staff classified at Level B and above and with an increasing degree of autonomy as the research academic gains in skill and experience.

Skill Base

A Level A research-only academic will normally have completed four years of tertiary study in the relevant discipline or have equivalent qualifications or research experience. In many cases a position at this level will require an honours degree or higher qualifications or equivalent research experience. Research experience may have contributed to or resulted in publications, conference papers, reports or professional or technical contributions which give evidence of research potential.



POSITION CLASSIFICATION STANDARD - Research Only

Level: B
Title: Fellow

Description

A position classification standard describes the broad categories of responsibility attached to research-only academic staff at different levels. The standards are not exhaustive of all tasks in research-only academic employment, which is by its nature multi-skilled and involves an overlap of duties between levels. The standards provide an adequate basis to differentiate between the various levels of employment and define the broad relationships between classifications.

Progression through an academic career will normally be based on research, teaching, administrative functions and contribution to the profession. The balance of functions will vary according to level and position over time. It is only in exceptional circumstances that promotion would be solely on the research only position classification standards.

- General Standard
- Specific Duties
- Skill Base

General Standard

A Level B research-only academic is expected to carry out independent and/or team research within the field in which he/she is appointed and to carry out activities to develop his/her research expertise relevant to the particular field of research

Specific Duties

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

- The conduct of research either as a member of a team or independently, and the production of conference and seminar papers and publications from that research.
- Supervision of research-support staff involved in the staff members' research.
- Guidance in the research effort of junior members of research-only academic staff in his/her research area.
- Contribution to the preparation, or where appropriate individual preparation, of research proposal submissions to external funding bodies.
- Involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise.
- Administrative functions primarily connected with his/her area of research.
- Occasional contributions in the teaching program within the field of the staff member's research.
- Co-supervision, or where appropriate supervision, of major honours or postgraduate research projects within the field of the staff member's area of research.
- Attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental and/pr faculty meetings and/or membership of a limited number of committees.

Skill Base

A Level B research-only academic will normally have completed a doctoral qualification or have equivalent qualifications or research experience. In addition he/she may be expected to have had post-doctoral research experience which has resulted in publications, conference papers, reports or professional or technical contributions which give evidence of research ability.