



## POSITION DESCRIPTION

Department of Chemical and Biomolecular Engineering  
School of Chemical and Biomedical Engineering  
Melbourne School of Engineering

### Research Fellow in Electronic Nanomaterials

*In line with the special measure H103/2014 provided for under section 12 of the Equal Opportunity Act 2010 (VIC), the Melbourne School of Engineering strongly encourages applications from suitably qualified female candidates.*

POSITION NO	0042982
CLASSIFICATION	Research Fellow Grade 1, Level A
SALARY	\$ 66,809* - \$ 90,657 p.a. (Level A) (*PhD entry Level A.6 \$84,458 p.a.)
SUPERANNUATION	Employer contribution of 9.5%
EMPLOYMENT TYPE	Full-time (1.0 FTE) Fixed term position available for 2 years Fixed term contract type: External Funding
OTHER BENEFITS	<a href="http://about.unimelb.edu.au/careers/working/benefits">http://about.unimelb.edu.au/careers/working/benefits</a>
CURRENT OCCUPANT	Vacant
HOW TO APPLY	Online applications are preferred. Go to <a href="http://about.unimelb.edu.au/careers">http://about.unimelb.edu.au/careers</a> , under 'Job Search and Job Alerts', select the relevant option ('Current Staff' or 'Prospective Staff'), then find the position by title or number.
CONTACT FOR ENQUIRIES ONLY	Professor Paul Webley Email <a href="mailto:paul.webley@unimelb.edu.au">paul.webley@unimelb.edu.au</a> <i>Please do not send your application to this contact</i>

For information about working for the University of Melbourne, visit our websites:  
[about.unimelb.edu.au/careers](http://about.unimelb.edu.au/careers)  
[joining.unimelb.edu.au](http://joining.unimelb.edu.au)

## ***Position Summary***

The successful applicant will work on an ARC Linkage funded project in the Department of Chemical and Biomolecular Engineering. The research project is in collaboration with the industry partner, Reserve Bank of Australia. The project focuses on the fabrication of thin film piezoelectric supercapacitors and the preparation of near infrared inks. The project will require expertise in electrochemical characterisation as well as an understanding of optical techniques.

The University offers a leading and robust research environment that is internationally engaged and recognised, community focused, and with many outstanding areas of research strength. You will conduct independent research, leading to the preparation and publication of research outcomes in conferences and journals. You will be located in the Department of Chemical and Biomolecular Engineering in the Melbourne School of Engineering and will be expected to be an active member of the Department, collaborating with other researchers. You may undertake small amounts of teaching and research supervision directly related to your area of research, as required.

The Melbourne School of Engineering is strongly committed to supporting diversity and flexibility in the workplace. Applications for part-time or other flexible working arrangements will be welcomed and will be fully considered subject to meeting the inherent requirements of the position.

The University plan seeks to increase the diversity of the workforce and the representation of women in areas they have been traditionally under-represented. Consistent with this, the School is seeking to increase the representation of women in the academic workforce across engineering disciplines. Under a Special Measure, under Section 12 (1) of the Equal Opportunity Act 2010 (Vic) the School is seeking to lift the representation of women from 20% in 2014 to at least 25% over the next 5 years, and strongly encourages applications from suitably qualified female candidates.

## ***1. Selection Criteria***

### **1.1 ESSENTIAL**

- ▶ PhD in Engineering, Chemistry, Nanotechnology or a relevant discipline;
- ▶ A record of quality research in carbon-based supercapacitors as evidenced by research publications in leading conferences and journals commensurate with opportunity;
- ▶ Experience in polymer-based thin film electronics related to piezoelectrics/and or supercapacitance;
- ▶ Knowledge of selective sorting of carbon nanotubes ;
- ▶ Capacity to undertake innovative and productive research in a timely manner in a related area and as evidenced by scholarly publication;
- ▶ Ability to perform independent research and a commitment to interdisciplinary research;
- ▶ Capacity to communicate research concepts to technical and non-technical audiences;
- ▶ Excellent written, verbal and interpersonal communication skills, demonstrated by presentation of research results at conferences and internal and industry forums;
- ▶ Demonstrated ability in analysing data, problem solving and maintaining accurate research records;

- ▶ Demonstrated ability to work both independently and collaboratively with other academic researchers;

## 1.2 DESIRABLE

- ▶ Experience in characterising carbon-based supercapactors;
- ▶ Experience in thin films and characterisation;
- ▶ Experience in setting up equipment for battery testing;
- ▶ Experience in postgraduate student supervision;

## 2. *Special Requirements*

None

## 3. *Key Responsibilities*

### 3.1 RESEARCH – ADVANCEMENT OF THE DISCIPLINE

- ▶ Independently plan and carry out research on the nominated research project and work towards completion of the aims of the project;
- ▶ Develop effective timelines and milestones based on goals of the research programme;
- ▶ Perform data analysis, and be responsible for qualitative and statistical analysis of research data and to communicate this information to the Chief Investigators and collaborators;
- ▶ Regularly write technical reports on the outputs of the experiments conducted, and maintain accurate and detailed records of all experiments conducted;
- ▶ Participate in preparation of manuscripts for publication in peer-reviewed journals;
- ▶ Liaise effectively with collaborators with a variety of internal and external stakeholders;
- ▶ Assist other researchers in carrying out experiments in order to work as a team and further the department's research output;
- ▶ Contribute to the development of the Department's and the School's strong research program in Chemical and Biomolecular Engineering;
- ▶ Work towards building an independent research project;

### 3.2 TEACHING AND LEARNING

- ▶ Contribute to teaching, training, scientific mentoring and supervision of students;
- ▶ Supervise junior research staff in the appointee's area of expertise;
- ▶ Conduct lectures, tutorials, mark and undertake laboratory duties as required by the Department.

### 3.3 ENGAGEMENT

- ▶ Attend and contribute actively to lab meetings;
- ▶ Present experimental results at local, national and industry forums;

- ▶ Attend and actively participate in departmental seminars, meetings and/or committee memberships.

### 3.4 SERVICE AND LEADERSHIP

- ▶ Assist with administrative duties and general laboratory duties including maintenance of the laboratory and equipment and ordering of supplies;
- ▶ Assist in the preparation and submission of competitive grant applications relating to the appointee's research program;
- ▶ Active participation in the communication and dissemination of research;
- ▶ Identify sources of funding to support individual or collaborative projects, relating to teaching, research and engagement practice in the discipline;

### 3.5 OTHER

- ▶ Perform other tasks as requested by the supervisor or the Head of the Department;
- ▶ Undertake Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in Section 5.

## 4. *Equal Opportunity, Diversity and Inclusion*

The University is an equal opportunity employer and is committed to providing a workplace free from all forms of unlawful discrimination, harassment, bullying, vilification and victimisation. The University makes decisions on employment, promotion and reward on the basis of merit.

The University is committed to all aspects of equal opportunity, diversity and inclusion in the workplace and to providing all staff, students, contractors, honorary appointees, volunteers and visitors with a safe, respectful and rewarding environment free from all forms of unlawful discrimination, harassment, vilification and victimisation. This commitment is set out in the University's People Strategy 2015-2020 and policies that address diversity and inclusion, equal employment opportunity, discrimination, sexual harassment, bullying and appropriate workplace behaviour. All staff are required to comply with all University policies.

The University values diversity because we recognise that the differences in our people's age, race, ethnicity, culture, gender, nationality, sexual orientation, physical ability and background bring richness to our work environment. Consequently, the People Strategy sets out the strategic aim to drive diversity and inclusion across the University to create an environment where the compounding benefits of a diverse workforce are recognised as vital in our continuous desire to service for excellence and reach the targets of Growing Esteem.

## 5. *Occupational Health and Safety (OHS)*

All staff are required to take reasonable care for their own health and safety and that of other personnel who may be affected by their conduct.

OHS responsibilities applicable to positions are published at:

<http://safety.unimelb.edu.au/topics/responsibilities/>

These include general staff responsibilities and those additional responsibilities that apply for Managers and Supervisors and other Personnel.

## **6. Other Information**

### **6.1 DEPARTMENT OF CHEMICAL AND BIOMOLECULAR ENGINEERING**

<http://www.chemeng.unimelb.edu.au>

The Department of Chemical & Biomolecular Engineering is a large and successful department within the Melbourne School of Engineering. Our laboratories are housed across four locations including a substantially renovated main building, a second building devoted exclusively to research, two floors within the nearby Chemistry building and a presence within the Bio21 Institute.

The department has a broad range of engineering strengths that are encapsulated across four main research themes: Materials Development; Separations Technology; Surface Chemistry and Rheology; and Bioengineering. We host several important Research Centres including Peter Cook Centre for Carbon Capture and Storage Research, ARC Dairy Innovation Research Hub, Particulate Fluids Processing Centre and the ARC Centre of Excellence in Convergent Bio-Nano Science and Technology. A total of 90 PhD students and around 30 postdoctoral fellows are employed across these research areas.

Our strong collaborations with industry, government and community partners inform our teaching and research programs with real-world requirements. Industry engagement is a key focus area for the Department.

### **6.2 MELBOURNE SCHOOL OF ENGINEERING**

<http://www.eng.unimelb.edu.au/>

The Melbourne School of Engineering is one of Australia's leading Engineering Schools and aims to be the school of choice for the highest performing students and research staff in Australia and within the Time Higher Education Supplement top twenty Schools of Engineering internationally by 2020.

### **6.3 THE UNIVERSITY OF MELBOURNE**

The University of Melbourne is a leading international university with a tradition of excellence in teaching and research. The University offers staff many benefits and prospective staff are encouraged to view the following web links:

[www.unimelb.edu.au](http://www.unimelb.edu.au)

[www.growingesteem.unimelb.edu.au](http://www.growingesteem.unimelb.edu.au)

[www.unimelb.edu.au/careers](http://www.unimelb.edu.au/careers)

### **6.4 EQUITY AND DIVERSITY**

Another key priority for the University is access and equity. The University of Melbourne is strongly committed to an admissions policy that takes the best students, regardless of financial and other disadvantage. An Access, Equity and Diversity Policy Statement, included in the University Plan, reflects this priority.

The University is committed to equal opportunity in education, employment and welfare for staff and students. Students are selected on merit and staff are selected and promoted on merit.

## **6.5 GOVERNANCE**

The Vice Chancellor is the Chief Executive Officer of the University and responsible to Council for the good management of the University.

Comprehensive information about the University of Melbourne and its governance structure is available at <http://www.unimelb.edu.au/unisec/governance.html>.