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<b>Position Title:</b>	Research Associate
<b>Position Classification:</b>	Level A
<b>Position Number:</b>	NEW
<b>Faculty/Office:</b>	Faculty of Engineering and Mathematical Sciences
<b>School/Division:</b>	School of Mechanical and Chemical Engineering
<b>Centre/Section:</b>	Centre for Energy
<b>Supervisor Title:</b>	Professor
<b>Supervisor Position Number:</b>	307261

### Your work area

UWA Centre for Energy is an internationally renowned research facility in fuels, combustion science and technology, and sustainable energy development. The Centre's mission is to develop new knowledge and advanced technologies for efficient, effective and environmentally friendly utilisation of fuels and energy in the resources industries. The Centre for Energy is located within the School of Mechanical and Chemical Engineering, which is renowned for its award-winning researchers, teachers and facilities. The broad-based undergraduate and postgraduate programs are complemented by a wide range of research activities. The School is a leader in developing graduates in the critical industries of energy and mineral resources, advanced materials and emergent manufacturing, chemical processing and environmental protection.

### Reporting Structure

*If a leadership/ supervisory role:*

Direct Reports:

Teams:

### Your role

Reporting to the Director of the Centre for Energy, the appointee will play a key role in the Centre's fuel conversion and processing, combustion science and technology and energy technology research. The appointee should have an excellent track record, including international scientific publications and hands-on experimental skills in combustion and reaction engineering and is expected to participate in postgraduate supervision. The appointee will work in collaboration with other senior researchers to develop research proposals and apply for research funding to various funding agencies.

A particular project the appointee will initially focus on is the synthesis, dissociation, catalytic oxidation and combustion of ammonia (NH<sub>3</sub>) as a clean, carbon-free transport fuel.

### Key responsibilities

To undertake research in the field of combustion science and technology, reaction engineering, catalysis, energy technology and environment engineering.

Design and conduct experimental and computational work related to research projects as assigned by the Director of UWA Centre for Energy.

Publishing peer-reviewed papers related to the research

Producing project reports as required.

Presentation of research results and conclusions at workshops and conferences

Limited contributions to teaching and supervision of postgraduate and undergraduate students

Other Duties as directed by the Centre Director

### **Your specific work capabilities (selection criteria)**

A PhD degree (or soon to be acquired PhD) in a relevant field featuring the application of a range of knowledge, skills and techniques in combustion science and technology, chemical and mechanical engineering.

Research experience in fuel processing and combustion, gas and liquid fuel combustion, catalysis and catalytic combustion, and kinetic modelling and computational fluid dynamic modelling

Proven track record in the application of various combustion experimental techniques and associated diagnostic techniques in combustion research.

Demonstrated proficiency in experiment design, performance and subsequent data analysis

Proven publication track record, relative to experience

Good oral communication skills

Ability to work both independently and in a team

Evidence of undergraduate or postgraduate student mentorship

### **Special Requirements**

### **Compliance**

#### **Workplace Health and Safety**

All supervising staff are required to undertake effective measures to ensure compliance with the Occupational Safety and Health Act 1984 and related University requirements (including Safety, Health and Wellbeing Objectives and Targets).

All staff must comply with requirements of the Occupational Safety and Health Act and all reasonable directives given in relation to health and safety at work, to ensure compliance with University and Legislative health and safety requirements.

Details of the safety obligations can be accessed at <http://www.safety.uwa.edu.au>

#### **Equity and Diversity**

All staff members are required to comply with the University's Code of Ethics and Code of Conduct and Equity and Diversity principles. Details of the University policies on these can be accessed at [http://www.hr.uwa.edu.au/publications/code\\_of\\_ethics](http://www.hr.uwa.edu.au/publications/code_of_ethics), <http://www.equity.uwa.edu.au>