Graduate Research
Department of Materials Engineering
The department has access to an even wider network of sophisticated international research facilities through its many collaborators and partners overseas. It has a large number of enrolments with approximately 60 higher degree students which makes for a lively research environment.

Research degrees currently being offered by the department are:

- PhD
- Master of Engineering Science (Research)

Postgraduate projects range from fundamental topics, to those which involve collaboration and funding from industry and government. Many of the departments’ research staff are involved in centres and major government and industry-funded research initiatives including:

- Cooperative Research Centre for Polymers
- Cooperative Research Centre for Cast Metals Manufacturing (Light Alloys),
- ARC Centre of Excellence in Design in Light Metals
- ARC Centre for Nanostructured Electromaterials
- Australian Stem Cell Centre
- NanoVic
- Victorian Centre for Advanced Materials Manufacture (VCAMM)
Research projects are available in the following areas:

<table>
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<tr>
<th>Category</th>
<th>Details</th>
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<tr>
<td>Advanced characterisation and diffraction physics</td>
<td>Advanced electron microscopy, diffraction atom probe field ion microscopy and synchrotron science.</td>
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<tr>
<td>Biomaterials and tissue engineering</td>
<td>Neural tissue engineering, regenerative medicine, embryonic stem cell research, surface modification of implants.</td>
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<tr>
<td>Ceramics</td>
<td>Ceramifiable polymer-ceramic composites, novel refractory materials, functional ceramics, advanced ceramic processing technologies and properties, solar cells.</td>
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<td>Conductive materials</td>
<td>Conducting polymers, fuel cells, ionic liquids, nanotubes, plastic crystal electrolytes</td>
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<td>Magnetic properties of materials</td>
<td>Nanostructured materials for electromagnetic device applications, Nanocomposite exchange-spring magnets.</td>
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<tr>
<td>Metals and metal alloys</td>
<td>High-performance light alloys, thermochemical and deformation behaviour, strengthening, structure and properties of steels, microstructural design, enhancement of durability.</td>
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<td>Modelling of metallic microstructure and process modelling</td>
<td>Alloy design, microstructural stability, phase transformation and recrystallisation, intelligent processing, property optimisation.</td>
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<tr>
<td>Nanomaterials, structures and characterisation</td>
<td>Solar cells, nanotubes, nanograined materials, polymer nanocomposites.</td>
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<tr>
<td>Polymers</td>
<td>Nanostructured thermosetting resins and interpenetrating polymer networks, synchrotron studies of polymers, hyperbranched polymers, microstructural development in injection moulding, advanced processing such as reactive rotational moulding, fatigue of reinforced polymers, nanoscale polymer-ceramic composites.</td>
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Postgraduate scholarships
The Australian Government, the Faculty of Engineering and the Department of Materials Engineering at Monash University offer postgraduate scholarships each year which cover tuition fees and/or living expenses. Permanent residents do not pay tuition fees. Applications for university and government schemes close at the end of October each year and successful applicants are notified at the end of December. However many academics have scholarships available throughout the year, as do the centres and Cooperative Research Centres with which the staff are involved. It is always worth checking with the faculty and individual departments to see what is available.

Australian Government postgraduate scholarships

Australian Postgraduate Award (APA)
This is offered by the Australian Government and is available to Australian citizens and permanent residents.

International Postgraduate Research Scholarships (IPRS)
Approximately 20 awards are available for Monash University each year. Those who already hold a PhD or Masters by research are ineligible. This award contributes to tuition fees only.

Monash International Postgraduate Research Scholarship (MIPRS)
This scholarship also pays tuition fees and is funded by a shared arrangement between the Monash University, the Faculty of Engineering and individual departments.

Monash University postgraduate scholarships

Monash Graduate Scholarship (MGS)
This scholarship provides a non-taxable stipend of approx. A$20,427 for living expenses.

Departmental scholarships

Monash Departmental Scholarship (MDS)
The Department of Materials Engineering offers postgraduate scholarships funded internally or from outside funds. These scholarships are usually advertised in the press, and also appear on the Department of Materials Engineering website.

Monash Research Scholarship (MRS)
The Department of Materials Engineering offers externally funded postgraduate scholarships where the sponsor (usually an industrial partner) indicates that the funding is to be used for a scholarship under specific conditions. These scholarships are generally advertised in the press and on our website.

Australian Postgraduate Award (Industry) (APA(I))
The aim of these awards is to prepare high calibre researchers for industrial research. They are funded by the Australian Government as part of research grants to academic staff. They are widely advertised as they become available.

Applications and enquiries for scholarships
Scholarship application kits (for IPRS, MGS, APA) are available from the Department of Materials Engineering from August onwards each year, to be returned before the end of October. The scholarship is taken up in January of the following year. Applicants are considered for all scholarships for which they are eligible. However, other scholarships may be available at different times – please feel free to contact the department to find out.

More detailed information can be found on our website: www.eng.monash.edu.au/materials/ or by contacting:
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