

## PhD positions – Institute for Frontier Materials, Deakin University, Australia

The Institute for Frontier Materials (IFM) at Deakin University has PhD scholarships available for both local and international students. IFM is a top materials science institute, with world-class research facilities. The scholarships provide an opportunity to join a large and diverse group of students, and work with world-leading researchers to help address some of society's major challenges through innovations in materials design and performance.

We are looking for motivated candidates who are available to join any time between July 2020 and May 2021.

Students will be supervised by senior members of the Institute for Frontier Materials, and supported by experienced postdocs. IFM researchers consistently publish in top international journals, such as *Nature Communications*, *ACS Applied Materials and Interfaces*, *ACS Nano*, *Acta Materialia*, *Advanced Functional Materials*, *Chemical Communications*, *Journal of Materials Chemistry*. Our graduates consistently achieve good positions in industry as well as in leading academic institutions.

IFM students are part of a large team working towards frontiers in materials design and performance, including the following areas:

- Advanced alloys
  - Rapid alloy design
  - Additive manufacturing
  - Flexible roll forming
  - High entropy alloys for surfaces
- Carbon fibres and composites
  - Reducing cost and increasing carbon fibre performance
  - Developing high-performance composite materials
  - Fundamental understanding of carbon fibre
- Electromaterials
  - Development of safe, efficient, rechargeable batteries
  - Novel ionic liquid electrolytes
  - Thermal energy harvesting devices - thermocells
- Fibres and textiles
  - Sustainable textile processing
  - Nanofibres
  - High value added applications
- Infrastructure materials
  - Corrosion monitoring and prevention
  - Infrastructure durability
  - Bio-corrosion, coatings and inhibitors
- Micro/nano materials
  - Development of nanoporous membrane materials
  - Molecular modelling and simulation



- Novel nano-materials synthesis and application.

Deakin University offers full tuition + stipend scholarships (the 2020 annual stipend rate is \$28,092 tax-free), as well as top up scholarships for those who have already received other funding. Each scholarship also includes attractive HDR funding to cover the cost of presenting at the major international conferences in the field and research facilities to support student's candidature. Scholarship holders can claim up to \$1500 for relocation expenses.

We welcome applications at any time. Please submit your application as soon as possible.

For more information please contact HDR support coordinator:

ifm-hdr-admin@deakin.edu.au

A list of available projects and more information about our is available here:  
<https://www.deakin.edu.au/ifm/study-with-us>

### **About Deakin University**

Deakin University is a leading research and teaching university, which consistently ranks in the top 1% globally and 29th in the world in the QS top universities under 50 years. Deakin entered the prestigious Academic Ranking of World Universities for the first time in 2014 and now ranks an estimated 261 (ARWU 2019), indicating Deakin is world class in a broad range of areas and is internationally competitive in its research and teaching. 100% of its research fields are rated 'at or above' world standard by Excellence in Research Australia (ERA 2019). Deakin has cutting-edge facilities and is a pioneer in its use of digital education platforms. For ten years in a row (2010-2019), it has been rated first in Victoria for overall satisfaction and quality measures for graduates and current students.