Curtin PhD Scholarship (aligned to an ARC Discovery Project)

Status: Archived
Applications open: 20/03/2018
Applications close: 20/04/2018

About this scholarship

Description/Applicant information
Microbiologically Influenced Corrosion (MIC) is a combination of microbial attachment and corrosion that accelerates deterioration and can lead to catastrophic failure of structures, costing billions of dollars a year. Chemical inhibition is often used to reduce the effects of MIC, however there is a need to develop safer and environmentally benign systems. A recent collaborative research project between Deakin University, Curtin University and Vrije Universiteit Brussel has been initiated to investigate the mechanisms of MIC (including biofilm formation) the behavior of different bacteria and bacteria colonies on steel substrates in a marine environment as well as the design, synthesis and mechanistic characterisation of novel, dual active corrosion inhibitors. This project is multidisciplinary and will involve a team of researchers across chemistry, microbiology and materials engineering.

The project at Curtin University will focus on studying the properties of complex, natural (multispecies) biofilms formed on steel surfaces in seawater and their relationship with corrosion and corrosion inhibition. It is expected that the student may spend some time in the laboratories of collaborators at Deakin University and/or VUB in Brussels and there will opportunity to attend at least one international conference.

Student type
- Current Students
- Future Students

Faculty
- Faculty of Science & Engineering
  - Engineering courses

Course type
- Higher Degree by Research

Citizenship
- Australian Citizen
- Australian Permanent Resident
- New Zealand Citizen
- Permanent Humanitarian Visa
- International Student

Scholarship base
- Merit Based

Value
Living stipend will be awarded to the successful applicant. The living stipend is paid by Curtin University according to the Australian Government RTP scholarship base rate of AU$27,082.00 (2018) per annum.

The student undertaking this collaborative PhD study will also benefit from the multidisciplinary research environment offered by both Deakin and Curtin.

Scholarship Details

Maximum number awarded
1

Eligible courses
PhD programs only
Eligibility criteria

- Meet the standard PhD course entry requirements for Curtin University.
- BEng (Hons), BSc (Hons) or MSc (preferred) in one of materials engineering, materials science, chemistry, physics or biological sciences.
- Demonstrated ability to conduct scientific research through either refereed journal publications or excellent project marks.
- Strong oral and written communication skills (min. IELTS total band of 7.0 and no individual band score less than 6.5).
- Demonstrated ability to work independently and to meet deadlines during the course of the project.
- Academic professional referees and/or previous supervisors contact details.
- Have hands on lab experience in microbiology. Preference will be given to candidates who have practical experience in biofilm research.

How to apply

Application process

Please email Dr. Laura Machuca Suarez (l.machuca2@curtin.edu.au) an expression of interest, including:
- Curriculum vitae
- Academic transcripts
- A brief cover letter

Need more information?

Enquiries

For specific project/research information please contact the Curtin supervisor via email:

Dr. Laura Machuca Suarez
Email: l.machuca2@curtin.edu.au