



## Australian PhD scholarship opportunity

### A novel ion-selective membrane development for efficient lithium recovery

#### Centre for Technology in Water and Wastewater (CTWW)

[The CTWW](#) is one of the leading research centres at UTS under the School of Civil and Environmental Engineering of the Faculty of Engineering and Information Technology, [University of Technology Sydney](#). CTWW has been consistently recognised for the development of world-class research in the water and wastewater field. UTS has been ranked by [US News in 2022](#) as the best #1st university globally for Water Resources and ranked 2nd in the world for SDG 6 Clean Water and Sanitation by 2022 [Times Higher Education Impact Ranking](#). The centre is focused on the development of innovative technologies that deliver abundant supplies of recycled, desalinated, harvested storm water and resource recovery.

We are pleased to announce an excellent opportunity for a PhD scholarship at the University of Technology Sydney (UTS), focusing on the development of a lithium-ion selective membrane for efficient lithium extraction across various applications. This research initiative is based at the Clean Technology in Water and Wastewater (CTWW) and promises to be a dynamic endeavour that contributes to cutting-edge advancements in the field.

#### PhD Project

The PhD project is funded by the Australian Research Council Discovery Project, and it aims to develop and fabricate a novel membrane that display selective lithium recovery from brine in a renewable energy driven electrochemical membrane technology. The student will be located at the Centre for Technology in Water and Wastewater (CTWW) of the School of Civil and Environmental Engineering under the UTS's Faculty of Engineering and Information Technology. The fabrication of lithium selective membranes embedded with nanomaterials and metal organic framework will create new knowledge on the dynamics of ion-size sieving and accelerating lithium transportation bringing significant commercial benefits to Australian mining industry, desalination, and water treatment sectors.

#### PhD support

The student will be jointly supervised by Dr Sherub Phuntsho, Dr. Gayathri Naidu and Prof Hokyong Shon at CTWW. The total scholarship stipend is AUD\$50,000 (tax-free) per annum for 3.5 years, and additional funding for travel and project work up to \$9,500 will also be available. The successful applicant can begin in Feb/March 2024.

#### Who should apply?

The applicant should have a minimum qualification of master's degree or bachelor's degree with Honours (Distinction) from the following disciplines:

Civil engineering, environmental engineering, civil & environmental engineering, chemical engineering, mechanical engineering, environmental science, polymer science, organic chemistry and environmental chemistry.



## How to apply

The application process has two stages.

### Stage 1:

Please send a copy of your CV, including details of educational attainment, employment history, publication activities, and citizenship, together with a cover letter to Prof Ho Kyong Shon ([Hokyong.Shon-1@uts.edu.au](mailto:Hokyong.Shon-1@uts.edu.au)), by 15 February 2024.

### Stage 2:

Shortlisted applicants will be interviewed, and the preferred candidate will then work with the supervisory panel to prepare a research proposal for submission.

**Initial closing date: 15 February 2024**

**Open to only:** Australian citizens and current Permanent Resident visa holders.

If you require further information on the position, contact Prof Ho Kyong Shon by email on [Hokyong.Shon-1@uts.edu.au](mailto:Hokyong.Shon-1@uts.edu.au) or [Sherub.Phuntsho@uts.edu.au](mailto:Sherub.Phuntsho@uts.edu.au)