

PhD Scholarship materials science-biochemistry

pore-size adjustable porous materials for purification purposes

The University of Adelaide in cooperation with Holoocyte Pty Ltd is recruiting a fully funded (\$32,500 p.a.) PhD student in the cross-section of materials science and biochemistry.

The suitable candidate will be supervised by Dr. Lukas Gerstweiler in the School of Chemical Engineering, The University of Adelaide, together with the industry partner Holoocyte Pty Ltd.

Overview

Holoocyte Pty Ltd is a materials science company established at the University of Adelaide in 2019, focusing on the development of a wide range of cellulose-based, polyethylene-based and protein-based high-performance materials and related industrial applications.

The candidate shall conduct research on pore-size-adjustable porous materials based on double-grid structure Copolymers and related applications in protein engineering and mineral screening. Developing novel copolymers with double grid / complex lattice structures is the frontier of research direction in materials science today.

We are trying to develop various high-performance functional materials based on accessible materials such as polysaccharides, and filamentous proteins. as well as efficient and low-cost solutions to critical problems that are being addressed by industry today, such as low-cost protein purification, screening of high-value minerals (like lithium), industrial gases' purifications. The candidate will have the opportunity to work hands-on on the development of cutting-edge high-performance materials for purification purposes, as well as having access to the development of other ultra-high-strength organic materials. The candidate will also have hands-on experience in the expression of various proteins from functional enzymes to small peptides, from laboratory reaction scale to industrial pilot production scale.

The work is not only focused on scientific research, but also on transforming research findings into products with economic value. This recruitment is a unique opportunity for talented young people to join us and acquire comprehensive skills, and create interdisciplinary knowledge, especially for whom aspire to become competent in value creation one day.

Key attributes/skills/qualifications required for application

We are looking for distinguished candidates who preferably have completed a bachelor's or master's degree in life sciences, chemistry, biochemistry, chemical engineering or related fields above average.

Candidates should have a solid theoretical foundation especially in organic chemistry and biochemistry, strong self-learning and fast learning ability, good hands-on capability, as well as a curious and courageous heart to explore the unknown.

The candidate should have the determination and perseverance to overcome difficulties independently, and also have good teamwork and communication skills.

A self-disciplined and self-driven personality will bring you more chances to win this opportunity.

Scholarship

The UARS scholarship covers all costs of the supported PhD candidate of the University of Adelaide until graduation (up to 4 years, totalling approximately A\$130,000), including supervisory fees, research expenses, and personal living expenses (AU\$32,500 p.a.) and benefits while in university. Please see the link below for more information.

<https://scholarships.adelaide.edu.au/Scholarships/postgraduate-research/all-faculties/university-of-adelaide-research-scholarships-0>

About The University of Adelaide

Ranked among the top 100 Universities world-wide in 2022 (THE) the University of Adelaide offers world leading research facilities and expertise in one of the most liveable cities in the world. The School of Chemical Engineering made significant investments in biomanufacturing capabilities which the successful candidate will access.

Further information can be found at:

<https://set.adelaide.edu.au/about-us>

Application Process

To apply for this scholarship opportunity, please apply by application deadline May 24th, 2023 (Our selection process will end on May 31 2023)

Please include

- **A personal statement**
- **Official transcripts.**
- **Published papers as the first author (if any)**
- **Three letters of recommendation (at least two from direct supervisors)**

Send email with attachments to Dr Lukas Gerstweiler at Lukas.gerstweiler@adelaide.edu.au