



ARC RESEARCH HUB ENERGY EFFICIENT SEPARATION

HUB OVERVIEW

The ARC-EESep is a critical 'one-stop-shop' for various industries to solve pressing industry problems in separation.

The Hub brings together a world-class team of 21 leading researchers in diverse disciplines (e.g., chemical engineering, materials engineering, environmental engineering, and chemistry) from eight Australian universities (Monash, UQ, UNSW, VU, Deakin, UTS, QUT, Curtin), CSIRO, and three top international universities (Yale, Warwick and Nanjing). The Hub works closely with industry players in the complete value chain of separation technologies, including separation materials fabricators, equipment manufacturers and end-users of separation technologies.

The Hub aims to develop advanced separation materials, innovative products and smart processes to reduce the energy consumption of the separation processes that underpin Australian industry. The Hub focuses on the development, synthesis, characterisation and integration of advanced materials (membranes, adsorbents and resins), across scales to enable novel products. The intended research outcomes allow the majority of Australian industries to become more energy-efficient and cost-competitive in a global economy.

20

Industry
Partners

8

Australian
universities

3

International
universities



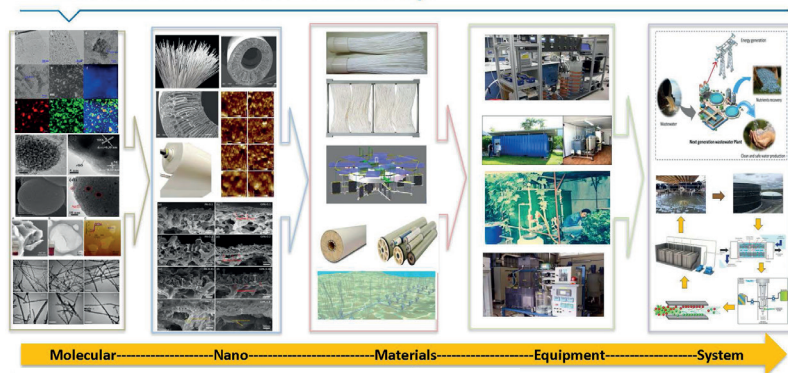
Hub activities include regular seminars, conferences & workshops, and international collaborations



Australian Government
Australian Research Council

Research themes

The Hub runs five research themes across multiple scales, from atomic to system. Through our research we aim to **create** high-performance, precisely designed separation materials, **invent** low-cost, scalable and green methods for the synthesis of nanomaterials, **develop** energy-efficient separation modules and packaged equipment using nanostructured separation materials, and **demonstrate** innovative applications of new separation materials and equipment



Chief Investigators

- Professor Xiwang Zhang, Hub Director, Monash University
- Professor Huanting Wang, Hub Deputy Director, Monash University
- Professor Mikel Duke, Node Director Victoria, Victoria University
- Professor Chuyang Tang, Node Director NSW, The University of New South Wales
- Professor Joe da Costa, Node Director Queensland, University of Queensland
- Professor Shaomin Liu, Node Director Western Australia, Curtin University
- Dr Lizhong He, Monash University
- Associate Professor Lian Zhang, Monash University
- Associate Professor Pierre Le-Clech, The University of New South Wales
- Professor Ho Kyong Shon, University of Technology Sydney
- Professor Long Nghiem, University of Technology Sydney
- Professor Stephen Gray, Victoria University
- Professor Graeme Millar, Queensland University of Technology
- Professor Anthony Fane, The University of New South Wales
- Professor Lingxue Kong, Deakin University
- Professor Wei Shen, Monash University
- Associate Professor Matthew Hill, Monash University
- Associate Professor Andrew Hoadley, Monash University
- Dr Ludovic Dumeé, Deakin University
- Professor Gregory Leslie, The University of New South Wales
- A/Prof Simon Smart, University of Queensland

Scientific Advisory Committee

An outstanding Scientific Advisory Committee has been established for the ARC-EESep Hub. Tasked with providing advice and guidance on future research and strategic direction, the Committee comprises eight distinguished world-renowned researchers.



Prof Tamarapu Sridhar



Dr Anita Hill



Prof Menachem Elimelech



Prof Tony Fane



Prof Benny Freeman



Prof Jiuhui Qu



Prof Ana Deletic



Prof Huanting Wang

ADVISORY COMMITTEES

Industry Advisory Committee

The rich experiences of the Industry Advisory Committee in research and management provide invaluable guides to the Hub's operation and provides the strategic authority to ensure achievements are maximised.



Ms Karen Rouse



Mr Peter Bury



Mr Bahay Ozcamak



Dr Dharma Dharmabalan



Dr Aaron William Thornton



Dr Hung Pham



Dr Nicholas Low

The Hub collaborates with 20 local and international companies involved in the water, materials energy, and environmental industries. Through joint research projects the ARC-EESep can provide innovative solutions for energy efficiency in separation technologies.

University partners



International university partners



Industry partners



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