



## Distinguished Lecture Series

# Professor Chuyang Y. Tang

## Membranes for Water, Energy, and a More Sustainable World

### ABSTRACT

Membrane separation technology is increasingly used for water and energy related applications. Pressure-driven membrane processes, such as microfiltration, ultrafiltration, nanofiltration (NF), and reverse osmosis (RO), have received great attention, fueled by the increasing needs for water purification, wastewater treatment and reuse, and seawater desalination. In parallel, many novel membranes and membrane processes are being developed for resource and energy recovery. In this talk, I will share my personal journey in the amazing membrane world. The talk includes two parts. The first part will introduce some exciting developments in RO and NF membrane materials and structural designs. Fundamental insights into membrane transport through RO and NF membranes will be highlighted, which translates into effective strategies for overcoming the longstanding permeability-selectivity upper bound. In the second part of the talk, I will highlight some interesting innovations in other membranes and membrane processes and their applications in water reuse, seawater desalination, energy production, resource recovery, and beyond.

### MEET OUR SPEAKER

CY Tang is a Chair Professor of Environmental Engineering at the University of Hong Kong. He obtained his PhD degree from Stanford University and has over 20 years' experience in membrane technology, water reuse, and desalination. Professor Tang is a Clarivate Highly Cited Researcher since 2021. He has published more than 300 journal papers, with a total citation of >41,000 and H-index of 110 according to Google Scholar. He is a co-editor of *Desalination*, a flagship journal on desalination and water reuse. Professor Tang led the invention of aquaporin-based biomimetic membranes, which resulted in the successful commercialization of Aquaporin Inside Membranes (AIMs®) by Aquaporin Asia Singapore. His R&D has received many prestigious awards and recognitions, such as RGC Senior Research Fellowship, Finland Distinguished Professor Program Fellowship, International Desalination Association (IDA) Fellowship, IDA Water Reuse & Conservation Award, Frontier Research Award by Chinese-American Professors in Environmental Engineering & Science, HKU Innovator Award, HKU Outstanding Researcher Award, etc. More information about Professor Tang's research can be found at [www.membest.hku.hk](http://www.membest.hku.hk).

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**18 April 2024 (Thursday)**  
**4:00 - 5:30 pm (HK Time)**

Format: Hybrid

Venue face to face: Y5303, Yeung Kin Man  
 Academic Building, CityU

Online via Zoom: link and password to be provided

**Deadline for registration: 17 April 2024**