香港大學 機械工程系
Department of Mechanical Engineering
THE UNIVERSITY OF HONG KONG

SEMINAR

Functional Materials for Energy Storage and Conversion

Date: 2 April, 2026 (Thursday)
Time: 10:30 a.m. – 12:00 noon
Venue: Tam Wing Fan Innovation Wing Two
G/F, Run Run Shaw Building, HKU

Speaker: Professor Shi-Zhang Qiao
School of Chemical Engineering
Adelaide University
Australia

Abstract:

Powered by renewable electricity, oxygen evolution reaction (OER) and hydrogen evolution reaction (HER) can efficiently split water into green hydrogen. A crucial step in realizing this prospect is the knowledge-guided design of optimal electrocatalysts with high activity and selectivity. In this presentation, I will talk about our recent progress in mechanism understanding and material innovation for electrocatalytic water/seawater splitting for green hydrogen production.

Aqueous zinc-based batteries (AZBs) hold significant potential for energy storage due to their low cost, high safety, impressive energy density, and environmental friendliness. However, they face major challenges for commercialization, including the lack of advanced cathode materials, low energy density and short cyclings etc. I will introduce our latest advancements that demonstrate the exceptional durability of Zn-I_2 batteries in industrial-scale pouch cells, which are operated under conditions of high active mass loading for cathodes and limited Zn supply for anodes.

Biography:

Dr. Shizhang Qiao is a Chair Professor at Adelaide University, Australia. His research expertise lies in nanostructured materials for electrocatalysis, batteries, and other new energy technologies. He has co-authored 600 papers in refereed journals with 161,000 citation times, resulting in an h-index of 206.

He is an elected Fellow of Australian Academy of Science (FAA), Australian Academy of Technological Sciences & Engineering (FTSE), Australian Laureate Fellow and ARC Industry Laureate Fellow. Dr. Qiao is the Editor-in-Chief of *EES Catalysis* (RSC) and recognized as a Clarivate Analytics Highly Cited Researcher in three categories (Chemistry, Materials Science, Environment and Ecology).

ALL INTERESTED ARE WELCOME

For further information, please contact Professor C.Y. Zhi at 3917 7900.