

Progress and Challenges of Alkaline Membrane Technologies

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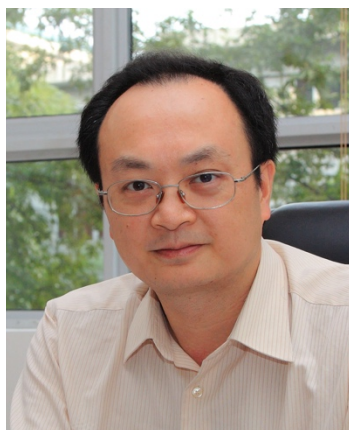
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In this talk, I will overview the recent progress of the development of alkaline membrane technologies in Wuhan University, including alkaline polymer electrolyte fuel cells (APEFCs) and alkaline polymer electrolyte CO₂ electrolysis. The relevant electrocatalysis and the device design will be the main topic. Challenges of this technologies will also be discussed, including the non-precious metal catalysts and the CO₂ effect on the APEFCs.

References:

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Lin Zhuang received his Ph.D. (1998) in electrochemistry at Wuhan University, and has been a full professor in Wuhan University since 2003. He was a visiting scientist at Cornell University in 2004–2005, and an adjunct professor of Xiamen University. He is a recipient of National Science Foundation for Distinguished Young Scholars and Chang Jiang Professorship appointed by the Ministry of Education, and serves as an associate editor of *ACS Sustainable Chemistry & Engineering* and editorial board member of several scientific journals including *Science China–Chemistry*. He was a vice chair of the physical electrochemistry division of ISE (2011–2012) and the chair of China section of ECS (2010–2011), and is the president elect of the Chinese Society of Electrochemistry (CSE).