

Development of Layered Vanadium Oxide as Cathode for Aqueous Zinc Ion Battery Applications**Speaker:** Shi Wen

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Date: 31th Oct 2019, Thursday
Time: 3:30 to 4:00 pm
Venue:

Abstract

Gradually, multivalent ion batteries with aqueous electrolytes have garnered strong research interest internationally owing to its high safety and low cost. Aqueous Zinc ion battery (ZIB), a famous category of multivalent ion batteries, have obtained a surge for research development since the year of 2015. Researchers mainly focused on developing cathode materials for aqueous ZIB. Vanadium Oxide is an important and promising cathode material for aqueous ZIB applications due to its various attributes such as high specific capacity. V_2O_5 is one popular cathode that has been well-studied. To further explore the alternatives to V_2O_5 , herein, a mixed-valence V_6O_{13} has been discovered and its unique properties have been well elaborated. In addition, a new strategy of having intercalant-free layered V_6O_{13} in ZIB is proposed for achieving high performance such as high specific capacity for aqueous ZIB applications.

Shi Wen received her Bachelor of Engineering degree from NUS Department of Materials Science and Engineering in Singapore. She is currently a Ph.D. candidate in Department of MSE under the supervision of Prof. Xue Junmin, focusing on cathode materials development for aqueous ZIB applications. Her current research interest is particularly aimed to develop vanadium oxides as cathode for aqueous ZIB applications.

ALL ARE WELCOME!

Host: A/P Xue Junmin