

**DEPARTMENT OF MECHANICAL ENGINEERING****SEMINAR****Online**

Title: Rocking-chair guanidinium-ion battery

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Date: 23 April, 2021 (Friday)

Time: 11:00 a.m.

Zoom Link: 1) Link to join the meeting:

<https://hku.zoom.us/j/93280227678?pwd=MC9pRUc1ZmJaWjgzZ0RSVWxMSmp1UT09>

2) Meeting ID: 932 8022 7678

3) Password: 036766

Abstract:

Over the past few decades, the tremendous efforts have been devoted to lithium-ion batteries for developing electrical energy storage (EES). However, owing to the limited lithium resources, toxic organic system and high flammability, their further development is restricted. Aqueous batteries with the merits of low cost, innate safety and environmental friendliness emerged as a promising alternative for large-scale storage. While the choice of the charge carrier will dominate the nature of battery chemistry which is crucial for the design of advanced batteries. A variety of ions have been used in batteries including single-valent and multivalent metal ion and even non-metal charge carrier. Among them, non-metal charge carriers, the sustainable charge carrier which can be derived from unlimited hydrogen and nitrogen on Earth, exhibit distinct properties and competitive performance in practice commanding increasing attention recently. In this report, we present a “rocking-chair” guanidinium ion (Gdm⁺) battery based on the full-cell configuration with a Prussian blue analogue cathode, and a 3,4,9,10-Perylene-bis(dicarboximide) (PTCDI) anode.

ALL INTERESTED ARE WELCOME

For further information, please contact Dr. S.P. Feng at 3917 2639.

Research area: Energy