

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

**Title:** Thermogalvanic Hydrogel for Low-grade Heat Harvesting

**Speaker:** Miss Yijie MU (PhD candidate)  
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**Date:** 19 April, 2021 (Monday)

**Time:** 10:30 a.m.

**Zoom Link:** 1) Link to join the meeting:

<https://hku.zoom.us/j/2263139875?pwd=MOFSUElZbDlVUE5oSXpiYlVRNm96UT09>

2) Meeting ID: 226 313 9875

3) Password: 543762

**Abstract:**

Low-grade heat (<100 °C) is one of the major forms of energy that is wasted in a great amount during industrial and commercial activities worldwide without proper recovery. Efficient conversion to electricity is a prospective solution to serious energy issues. So far different ideas have been proposed to harvest low-grade waste heat and convert it into electricity, such as solid-state thermoelectric devices and liquid-based thermoelectrochemical cells. Development towards leakage-free electrolyte systems is important in terms of transportation and storage, which can be achieved by the application of a hydrogel-based electrolyte system. By incorporating modified redox couples into the hydrogel matrix, we demonstrate a relatively high thermopower in our ionic thermoelectric hydrogel system. Moreover, the hydrogel matrix is designed to be tough and stretchable, which is a promising candidate for the design of wearable devices.

**ALL INTERESTED ARE WELCOME**

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

**Research area: Energy**