

High-Energy-Density and Low-Cost Flow Electrochemical Devices

>> Developed by **Prof. LU Yi Chun** et al
Department of Mechanical and Automation Engineering

Aim

- To develop ultra-high-energy-density and low-cost flow electrochemical devices

Applications

- Electric vehicle
- Large-scale electricity storage

Features

- Key novel design of electrode structure and flow configuration
- Higher energy density compared to current redox flow batteries of any given electrode active materials
- No compromised electrical conductivity as compared to the semi-solid approach
- No phase-separation issues
- ↓ usage of ion-permeable membrane
- ↓ costs for suspension optimization & expensive membrane

Other research works of Prof. LU on electrochemical and bioelectrochemical energy storage and conversion:
<https://sites.google.com/site/yichunlu618/research>



Related Patents

- **US**15/371,466
- **PCT**/CN2016/109055
- **CN**201680002631.4

CUHK Tech ID: P-2015-0645 | For further information, please contact:
Dr. Ken CHOW | kenchow@cuhk.edu.hk | +852-3943 1453



研究及知識轉移服務處
Office of Research and
Knowledge Transfer Services



香港中文大學
The Chinese University of Hong Kong