



Dr. Zhongtao Li

State Key Laboratory of Heavy Oil Processing
China University of Petroleum

Nanomaterials for Energy Storage and Conversion

Jun 24, 2018 | Bldg. 101
Sunday 15:10 | Seminar Room on the 1st floor

Abstract: High performance power sources are playing an essential role in our daily lives. New electrode materials are urgently needed for meeting the requirements of next generation electrochemical cells with higher electromotive force, longer cycling ability, and higher energy density. I discuss: (1) the substituent chemistry in the periphery of metal porphyrins for exploration of the influence of substituent groups on the structure and composition in Fe-N-C ORR catalysts after pyrolysis. (2) An ultra-stable sodium ion battery anode material by rationally manipulating the crystalline tin-based compound into an amorphous material. The key controlling factors and reaction mechanism will be discussed.

Reference:

- [1] Appl. Catal. B.; 2018, 204;
- [2] ACS Nano, 2018, 1990;
- [3] ACS Appl. Mater. Inter., 2017, 44519;
- [4] ACS Appl. Mater. Inter., 2017, 5272;
- [5] J. Mater. Chem. A, 2017, 6170;
- [6] J. Mater. Chem. A, 2014, 7471;
- [7] J. Mater. Chem. A, 2015, 16057;

Zhongtao Li received his Ph.D. degree from the Key Laboratory for Organic Solids at the Institute of Chemistry, Chinese Academy of Sciences in 2009 and then did postdoctoral research at the University of California, Santa Barbara until 2011. He is currently an associate professor at China University of Petroleum. His research interests include design and synthesis of nanocomposites for energy storage devices, and electrochemical catalytic electrodes for fuel cell and water splitting etc.. He is the author or co-author of around 50 papers in international journals and holds around 10 patents.

You are cordially invited to attend!

Special Guest Seminar