

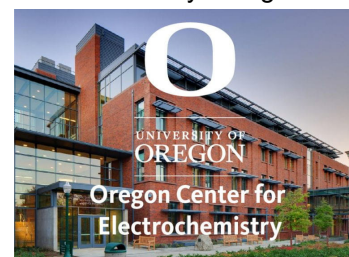


Prof. Linqin Mu

Oregon Center for Electrochemistry

Friday, January 14, 2022

3:00 pm, 110 Willamette, or Zoom *



High-energy layered cathode materials for energy storage

ABSTRACT: Mu will discuss the heterogeneous degradation of the commercialized cathode materials chemically and mechanically at multiple length scales. The degradation usually occurs from the nano-sized primary particles, with significant surface oxygen release. Aiming to push the battery energy density approach their theoretical limit, increasing the Ni concentration and limiting the Co usage is necessary, which would magnify the surface and interface instability. Thus, to prevent the initial degradation, she developed the bimodal doping in the primary particle that enhances the surface oxygen retention, enabling the Co-free cathode materials a stable cycle life.

BIO:

Linqin Mu, currently a research assistant professor at the University of Oregon, Department of Chemistry and Biochemistry, was a postdoc and senior research associate at Virginia Tech. Her expertise is in renewable energy, particularly in energy storage rechargeable batteries. She received a Ph.D. from the Institute of Physics, the Chinese Academy of Sciences. Her research focuses on developing low-cost and high-energy cathode materials for both Li and Na batteries, the fundamental understanding of the degradation mechanisms in the batteries by the comprehensive synchrotron imaging and spectroscopic techniques.

* Link info: jmacha@uoregon.edu