Dear Colleagues,

Environmental and energy issues have become increasingly prominent, making the demand for electrochemical energy conversion and storage devices urgent, such as the application of Li-ion batteries, and supercapacitors in portable electronic devices and electric vehicles, as well as the preparation of renewable clean energy and high value-added chemicals via electrolytic water and electrolytic mixed water systems. The research of symmetrical electrode materials first began in supercapacitors; there is relatively litte research into Li-ion battery and electrocatalysis systems. Symmetrical electrode materials, that is, those in the same system, the same active electrode materials can be used for both cathode and anode. Because of this characteristic, the symmetrical electrochemical system with symmetrical electrode material as cathode and anode has incomparable advantages, such as weakening the changes of device volume expansion and contraction and simplifying and reducing the production process and cost. The development of high-performance symmetrical electrode materials plays an important role in promoting the further application of electrochemical energy conversion and storage devices.