Special Issue

Catalysts and Electrode Functionalization for Redox Flow Battery

Message from the Guest Editors

A typical redox flow battery (RFB) consists of two external reservoirs for storing energy, a cell unit for energy conversion, and the circulation system between the electrolyte tanks and the cell units. In particular, the electrode is the key component of the RFB system, because it provides the active sites for electrochemical reaction but does not take part directly in the electrochemical reaction. The reversibility and overall electrocatalytic activity of the electrode toward the redox couple reaction determine the electrochemical polarization, and the hydrophilicity and pore structure of the electrode will have a significant influence on the concentration polarization. Therefore, a high-performance, high-efficiency electrode with minimal overpotential is desired. This Special Issue aims to focus on studies on the catalysts and the electrode functionalization for enhancing RFB efficiency. Submissions on other methods for enhancing RFB efficiency are also welcomed in this Special Issue.

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