Special Issue

Hybridization in Post-lithium Ion Batteries

Message from the Guest Editor

As alternatives to the lithium ion battery (LIB), many types of secondary batteries, such as sodium ion, lithium–sulfur, lithium–metal and solid-state batteries, have received enourmous attention. One of the key aspects in such post-LIB systems is to establish a stable interface between the electrolyte and electrode. Efficient hybridization approaches in the microcrystalline or nanocrystalline range play a pivotal role in stabilizing and controlling the electrolyte–electrode interface that gives rise to a high-performing battery system. Furthermore, drawbacks of the electrode materials can be significantly mitigated through hybridization. This Special Issue addresses all the hybridization strategies applied in the cathode/anode electrodes and electrolytes to mitigate the drawbacks of the current post-LIBs. In addition, diverse in situ characteristics such as in situ XRD or XANES/EXAFS studies are of interest to investigate the effect of hybridization in the micro- or nano-structural range on battery performance.

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