Special Issue

Physical Properties of Sodium-Ion Battery Materials

Message from the Guest Editor

The sodium-ion secondary battery is a promising, low-cost energy storage device. In order to create high-performance, safe devices, however, we should know much about the cathode and anode materials and clarify what happens in them during the charge and discharge processes. From a different perspective, the cathode and anode materials are a unique system in which we can electrochemically control the sodium concentration by an order of one. In such a system, the strong interaction between the host framework and the guest sodium ion causes a variety of phenomena, such as phase transition, phase separation, and so on. These phenomena are not only scientifically interesting, but also technologically significant to make a safe device. In this Special Issue, we focus on the physical properties of the cathode and anode materials.

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