The 89th GREEN Seminar

Bulk and Interphase Design of Insertion Materials and Electrolytes for K-Ion Batteries

Chair: Dr. Shoichi Matsuda (GREEN)

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Lithium-ion batteries (LIBs) are widely used in electronics, electric vehicles, and even stationary energy storage systems. However, minor elements such as Li, Co, and Ni are used in LIBs, and the supply of these resources becomes a concern with increasing demand. Therefore, secondary batteries composed of earth-abundant elements are desired to complement LIBs. In recent years, K-ion batteries (KIBs) have attracted considerable attention as potential alternatives to LIBs. We demonstrate the first 4 V-class KIB with a combination of a graphite negative electrode, $K_xMn[Fe(CN)_6]$ positive electrode, and nonaqueous electrolyte. This talk will give an overview of research development on KIBs based on our achievements of K-ion insertion materials and electrolytes.

Venue: Rm. 409/410, 4F, Collaborative Research Bldg., Namiki-site

Date: Thursday, April 20th

Time: 15:00-16:00

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