

Lithium *K*-edge XANES Spectra of Li-Inserted Carbon Materials

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Abstract

Lithium *K*-edge XANES (X-ray Absorption Near-Edge Structure) spectra of the lithium-inserted carbon materials of the negative electrode in the rechargeable lithium ion battery were measured by means of the total electron yield. The measurement samples were the lithium-inserted graphite and amorphous carbon prepared by the electrochemical lithium intercalation method. The obtained spectral shape of the lithium-inserted graphite material was compared with that of the lithium-inserted amorphous carbon material. The difference in the local structure of each sample was reflected in the spectral shape. The chemical bonding state of the lithium in the materials was discussed.

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