Lithium Acetate Dihydrate와 Cobalt(II) Acetate Tetrahydrate로 합성한 $LiCoO_2$의 전기화학적 특성

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Electrochemical Properties and Synthesis of $LiCoO_2$ Using Lithium Acetate Dihydrate and Cobalt(II) Acetate Tetrahydrate

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Abstract : $LiCoO_2$ powder was synthesized by Sol-Gel method using inorganic materials. The starting materials, $CH_3COOLi*2H_2O$ and $Co(CH_3COO)_2*4H_2O$, were mixed in the atomic ratio Li/Co of 1 and dissolved in i-propanol with acetic acid. The solution was dried for gelation, and finally obtained the pre-powder. The pre-powder were studied by thermal analysis. Based on the TGA result, heat treatment was performed at various temperature(500 to 800℃) for 2h in air atmosphere. The crystal structure, morphology, electrochemical property were carried out using XRD, SEM, cyclic voltammetry(CV).

Key Words : $CH_3COOLi*2H_2O$, $Co(CH_3COO)_2*4H_2O$, $LiCoO_2$, Sol-Gel processes, Li-batteries.