

# Characteristics of $\text{LiMn}_2\text{O}_4$ Cathode Material Prepared by SHS for Li Ion Battery

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## Abstract

$\text{LiMn}_2\text{O}_4$  as the cathode activity material for lithium secondary battery was prepared from a homogeneously mixed powder of  $\text{Li}_2\text{CO}_3$ ,  $\text{NaN}_3$ ,  $\text{MnO}_2$  by SHS process under air atmosphere. Powder characteristics varying reaction conditions were investigated. The reaction temperature/velocity and the size of  $\text{LiMn}_2\text{O}_4$  were controlled by  $\text{Li}_2\text{CO}_3$  molar ratio and heat treatment, respectively. The optimum condition is 1.5 Li/Co molar ratio and the heat treatment  $900^\circ\text{C}$  for 2hour.

key words :  $\text{LiMn}_2\text{O}_4$ , SHS process