

A brief review of layered rock salt cathode materials for lithium ion batteries

Abstract

Nowadays, many researchers have been studying on the layered rock salt-type structure as cathode materials for the lithium ion batteries. LiCoO_2 is the most commonly use cathode material but Co is costly and toxic. Thus, alternative cathode materials which are cheaper, safer and having higher capacity are required. Replacing Co with Ni offered higher energy density battery but it raised interlayer mixing or cation disorder that impedes electrochemical properties of batteries. This paper has reviewed some recent research works that have been done to produce better and safer cathode materials from the structural perspective.

Keywords

Cathode materials; Interlayer mixing; Layered rock salt; Lithium ion batteries