

Studies on $\text{LiNi}_{0.8}\text{Co}_{0.2}\text{O}_2$ Nano Materials

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Abstract

$\text{LiNi}_{0.8}\text{Co}_{0.2}\text{O}_2$ is synthesized by the solid state reaction method. Nano sized crystallites of $\text{LiNi}_{0.8}\text{Co}_{0.2}\text{O}_2$ are then prepared by using the high energy ball-milling method. The bulk material and the nano sized material are characterized by X-Ray diffraction and peak broadening of the nano-material is clearly observed. SEM micrographs of the bulk and nano materials are also taken and they reveal crystallites of less than 100 nm. Cyclic voltammetry tests are done on the materials to see if there are any changes in the redox potentials of the materials.

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