ISTITUTO ITALIANO
DI TECNOLOGIA

TITLE

Process for the colloidal synthesis of lithium iron phosphate

INVENTORS

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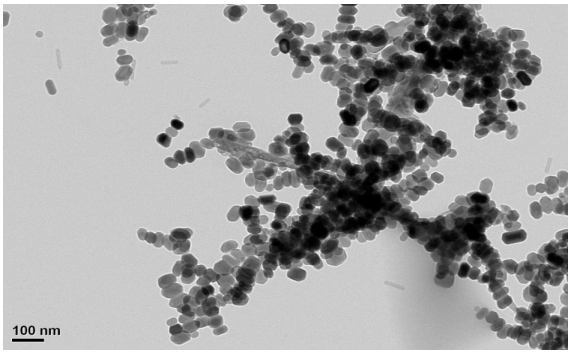
DESCRIPTION

Lithium Iron Phosphate nanocrystals are synthesized by a colloidal method; this synthesis permits to control very efficiently the shape and the size of the crystals. The size of the nanoparticles is below 100 nm. These nanocrystals can be used as a cathode in Li-ion battery. The process of lithiation and de-lithiation could be easier respect to the past due to the small size of the crystals that lead to high surface/volume ratio. $LiFePO_4$ is not a conductive material and it needs a carbon coating. Working with $LiFePO_4$ NCs this step is no more necessary because the electrical conductivity is increased in the nanosized material.



APPLICATIONS

cathode material in Li-ion battery , all electronic portable devices makers

KEYWORDS

Lithium Iron Phosphate nanocrystals, colloidal synthesis, Li-ion battery

BIBLIOGRAPHIC DATA

Procedimento di sintesi colloidale di litio ferro fosfato	
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