

عنوان مقاله:

SYNTHESIS AND OPTIMIZATION OF FINE POWDERS OF LIALTI(PO)NASCON-TYPE STRUCTURE VIA A
POLYMERIZABLE PRECURSORMETHOD

محل انتشار:

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خلاصه مقاله:

In this research, a nanostructured NASICON-type (Na-Super Ionic Conductor) based on Lithium, i.e. $\text{LiAlO-Ti}_2(\text{PO}_4)_3$ (LATP), was synthesized through modified Pechini-type sol-gel method. Watersoluble ammonium citrate peroxotitanate metal complex was used as precursor instead of conventional alkoxide, leading to the production of monophasic nanostructure. X-Ray diffractometry (XRD) and scanning electron microscopy (SEM) were performed for phase analysis and the morphology investigation of the produced powders, respectively. Moreover, differential thermal analysis (DTA) was employed to determine the calcination and crystallization temperatures to optimize the synthesis temperature. The modified Pechini-type method allowed obtaining well crystallized LATP at a much lower temperature and with a shorter synthesis time in comparison with the conventional solid-state reaction.

کلمات کلیدی:

NASICON, nanostructure, Pechini-type sol-gel

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