

Synthesis, Structure and Functional Characteristics of Solid Electrolytes Based on Lanthanum Niobates

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Abstract : The solid solutions of lanthanum niobates substituted by yttrium, bismuth and tungsten were synthesized. The structure of the solid solutions is either LaNbO₄-based monoclinic or BiNbO₄-based triclinic. The series where niobium is substituted by tungsten on B site reveals phase-modulated structure. The values of cell parameters decrease with increasing the dopant concentration for all samples except the tungsten series although the latter show higher total conductivity.

Keywords : impedance spectroscopy, LaNbO₄, lanthanum ortho-niobates, solid electrolyte

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