

NANOSIZE BaTiO₃ FORMATION FROM BARIUM TITANYL OXALATE (BTO) PRECURSOR UNDER HYDROTHERMAL CONDITIONS

TUNCER Mustafa, RIMAN Richard, ATAKAN Vahit, GOCMEZ Hasan

Dumlupinar University, Kutahya, Turkey

Abstract

The formation of BaTiO₃ via the decomposition of Ba-Ti oxalate precursors by instant hydrothermal method (invented by Richard Riman et al., US 20110044876-A1) was studied. The tetramethylammonium hydroxide (TMAH) was used as a basic reagent. All decomposition studies were conducted at RT and 100 °C under the 1 atm of pressure. The effect of decomposition conditions (reactant concentration of oxalate and basic reagent, temperature, the type of solvent and surfactant) on the formation of BaTiO₃ was examined.

Keywords: Instant hydrothermal method, BaTiO₃, TMAH

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