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용매열법에 의한 티탄산바륨 분말의 합성 및 특성분석
Solvothermal synthesis of barium titanate powder and characterization

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The influence of processing parameters on the phase and the particle size of solvothermally derived BaTiO3 powders were investigated. Tetragonal BaTiO3 powders with an average particle size of 70 to 100nm could be prepared by using various kind of solvent as a reaction medium and by increasing [Ba] excess from [Ba]/[Ti] of 1 to 4. Tetragonality of BaTiO3 powders was dependent on the synthetic condition. Highly tetragonal powder with an average particle size of 100nm have been successfully prepared using EtOH as a reaction medium at a low temperature.