

Tenth Young Researchers' Conference Materials Science and Engineering

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Program and the Book of Abstracts

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Mechanochemical synthesis $\text{Ba}_{0.8}\text{Sr}_{0.2}\text{TiO}_3$

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$\text{Ba}_{0.8}\text{Sr}_{0.2}\text{TiO}_3$ was prepared from the starting materials BaCO_3 , SrCO_3 and TiO_2 through solid state reaction. Mixture of these oxides was mechanically activated using a high-energy ball mill at different time intervals from 0 to 120 minutes. The crystal structure was determined by X-ray diffraction to obtain information about the composition of phase variation. It was observed that after 40 minutes occurred early synthesis $\text{Ba}_{0.8}\text{Sr}_{0.2}\text{TiO}_3$. Particle size distribution along with scanning electron microscopy gave very useful information about powder morphology.