OAK RIDGE NATIONAL LABORATORY
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Non-Aqueous Low Temperature Refluxing Synthesis of Nanocrystalline BaTiO3

Disclosure Number

200201055

Technology Summary

The subject invention disclosed herein is a method for the synthesis of nanocrystalline BaTiO3 (BT) in various solvent media. The morphology and particle size of BT particles are closely related to the dielectric property of the solvent media. The size of BT nanocrystals can also be controlled by different mineralizers that are used during the synthesis process. The method of the subject invention produces low water content BT particles and therefore possibly lower lattice water defects in the BT nanocrystals, which is beneficial to the manufacture of multilayer ceramic capacitors (MLCC).

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