

Supplementary Information

Low-Temperature Synthesis of Solid-Solution $\text{Ba}_x\text{Sr}_{1-x}\text{TiO}_3$ Nanocrystals

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Table S1. Elemental composition of the $\text{Ba}_x\text{Sr}_{1-x}\text{TiO}_3$ nanocrystals.*

Expected $\text{Ba}^{2+}:\text{Sr}^{2+}$	Actual $\text{Ba}^{2+}:\text{Sr}^{2+}$
0.10: 0.90	0.14: 0.86
0.20: 0.80	0.27: 0.73
0.30: 0.70	0.33: 0.67
0.40: 0.60	0.43: 0.57
0.50: 0.50	0.48: 0.52
0.60: 0.40	0.63: 0.37
0.70: 0.30	0.69: 0.31
0.90: 0.10	0.77: 0.23

*Expected compositions were determined by mol:mol ratios of starting materials and actual compositions were measured by ICP-OES.

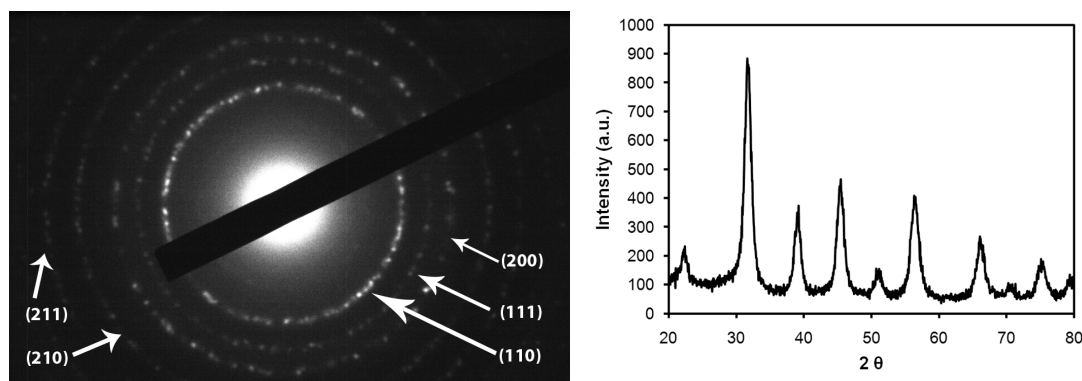


Fig. S1 (left) Selected area electron diffraction pattern for an ensemble of $\text{Ba}_{0.69}\text{Sr}_{0.31}\text{TiO}_3$ nanocrystals. (right) Powder X-ray diffraction pattern of $\text{Ba}_{0.69}\text{Sr}_{0.31}\text{TiO}_3$ nanocrystals.

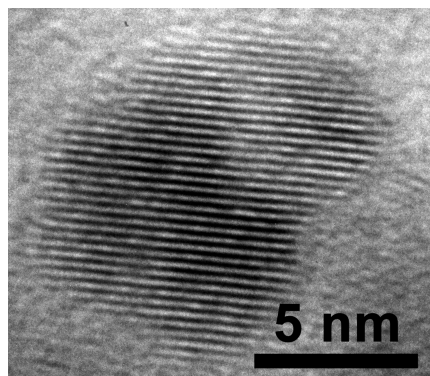


Fig. S2 High-resolution TEM image of a single $\text{Ba}_{0.69}\text{Sr}_{0.31}\text{TiO}_3$ nanocrystal.

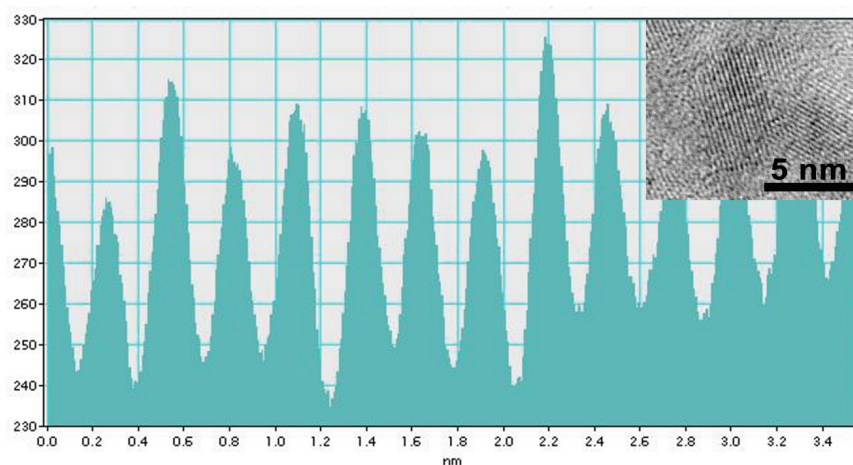


Fig. S3 Intensity line profile for lattice fringes of a single $\text{Ba}_{0.48}\text{Sr}_{0.52}\text{TiO}_3$ nanocrystal along the (110) family of planes. Lattice fringes are equally spaced, suggesting the presence of a homogeneous, single-crystalline solid solution.

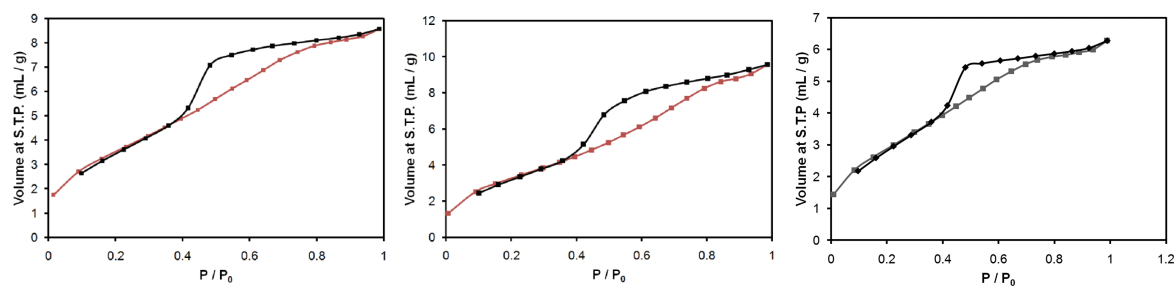


Fig. S4 Nitrogen adsorption-desorption isotherms for fractured pellets of SrTiO_3 (left) and $\text{Ba}_{0.69}\text{Sr}_{0.31}\text{TiO}_3$ (middle), and BaTiO_3 (right) nanocrystals.