Accepted Manuscript

Title: Enhanced electrostrictive effects in nonstoichiometric $0.99Bi_{0.505}(Na_{0.8}K_{0.2})_{0.5-x}TiO_3$-$0.01SrTiO_3$ lead-free ceramics

Authors: Xing Liu, Feng Li, Jiwei Zhai, Bo Shen, Peng Li, Yang Zhang, Baihui Liu

PII: S0025-5408(17)30785-7
DOI: http://dx.doi.org/10.1016/j.materresbull.2017.09.009
Reference: MRB 9549

To appear in: *MRB*

Received date: 27-2-2017
Revised date: 1-8-2017
Accepted date: 5-9-2017

Please cite this article as: Xing Liu, Feng Li, Jiwei Zhai, Bo Shen, Peng Li, Yang Zhang, Baihui Liu, Enhanced electrostrictive effects in nonstoichiometric 0.99Bi0.505(Na0.8K0.2)0.5-xTiO3-0.01SrTiO3 lead-free ceramics, Materials Research Bulletinhttp://dx.doi.org/10.1016/j.materresbull.2017.09.009

Enhanced electrostrictive effects in nonstoichiometric $0.99Bi_{0.505}(Na_{0.8}K_{0.2})_{0.5-x}TiO_3$-$0.01SrTiO_3$ lead-free ceramics

Xing Liu, Feng Li, Jiwei Zhai*, Bo Shen, Peng Li, Yang Zhang, Baihui Liu

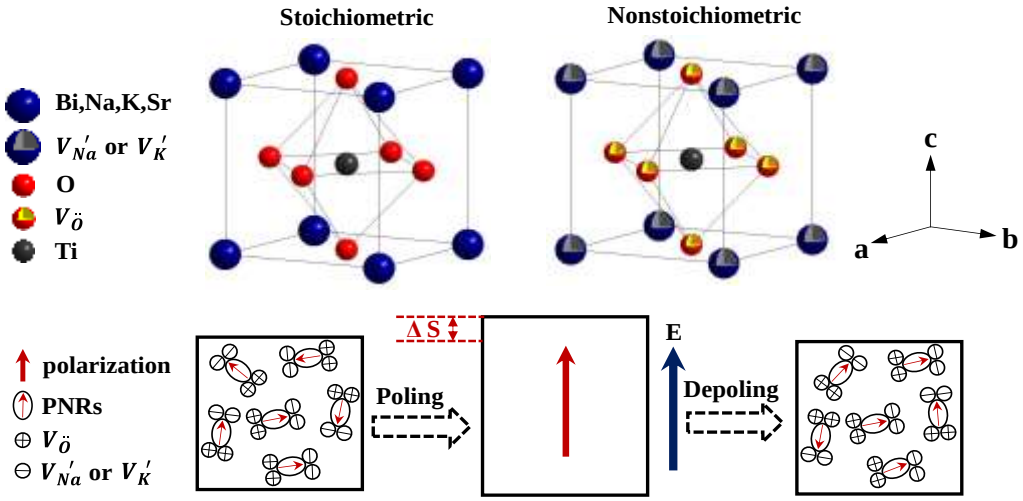
Key laboratory of Advanced Civil Engineering Materials of Ministry of Education, Functional Materials Research Laboratory, School of Materials Science & Engineering, Tongji University, 4800 Caoan Road, Shanghai 201804, China

*Corresponding authors:

E-mail addresses: apzhai@tongji.edu.cn (J. Zhai)

Tel.: +86 21 69584759; fax: +86 21 69584759

Graphical abstract



Highlights

- A-site nonstoichiometric BNKST ceramics were prepared and investigated.
- Achieving large electrostrictive effects in nonstoichiometric BNKST ceramics.
- Disordered structure and dynamic PNRs play key roles on electrostrictive effects.
- Good thermostability of electrostrictive coefficients in a wide temperature range.