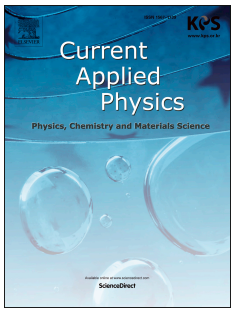
Accepted Manuscript



Irreversible phase transition characteristic of $0.91Pb(Zn_{1/3}Nb_{2/3})O_3$-$0.09PbTiO_3$ single crystals by domain observation

Rongfeng Zhu, Qihui Zhang, Bijun Fang, Jianning Ding, Xiangyong Zhao, Haosu Luo

PII: S1567-1739(16)30242-5

DOI: 10.1016/j.cap.2016.09.005

Reference: CAP 4321

To appear in: *Current Applied Physics*

Received Date: 4 August 2016

Accepted Date: 5 September 2016

Please cite this article as: R. Zhu, Q. Zhang, B. Fang, J. Ding, X. Zhao, H. Luo, Irreversible phase transition characteristic of $0.91Pb(Zn_{1/3}Nb_{2/3})O_3$-$0.09PbTiO_3$ single crystals by domain observation, *Current Applied Physics* (2016), doi: 10.1016/j.cap.2016.09.005.

Irreversible phase transition characteristic of $0.91Pb(Zn_{1/3}Nb_{2/3})O_3$-$0.09PbTiO_3$ single crystals by domain observation

Rongfeng Zhu[1], Qihui Zhang[1], Bijun Fang*[,1], Jianning Ding*[,1,2], Xiangyong Zhao[3], Haosu Luo*[,3]

[1]School of Materials Science and Engineering, Jiangsu Collaborative Innovation Center of Photovolatic Science and Engineering, Changzhou University, Changzhou 213164, China

[2]School of Material Science and Engineering, Jiangsu University, Zhenjiang 212013, China

[3]Key Laboratory of Inorganic Function Material and Device, Chinese Academy of Sciences, Shanghai 201800, P. R. China

*Corresponding authors:

E-mail addresses: fangbj@cczu.edu.cn (B. Fang); dingjn@cczu.edu.cn (J. Ding); hsluo@mail.sic.ac.cn (H. Luo)

Tel.: +86 519 86330095; fax: +86 519 86330095

Abstract: In situ temperature dependent ferroelectric domains dynamic evolution of the $(001)_{pc}$ oriented $0.91Pb(Zn_{1/3}Nb_{2/3})O_3$-$0.09PbTiO_3$ (PZNT91/9) single crystals was observed by polarized light microscopy (PLM) and real time synchrotron-radiation (SR) X-ray white-beam topography. Intricate domain structures including monoclinic