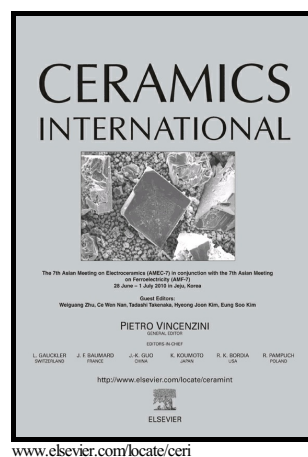


Tetragonal Er^{3+} -doped $(\text{K}_{0.48}\text{Na}_{0.48}\text{Li}_{0.04})(\text{Nb}_{0.96}\text{Bi}_{0.04})\text{O}_3$: lead-free ferroelectric transparent ceramics with electrical and optical multifunctional performances

Xiao Wu, Cengceng Fang, Jinfeng Lin, Chunwen Liu, Laihui Luo, Mei Lin, Xinghua Zheng, Cong Lin



PII: S0272-8842(17)32776-1
DOI: <https://doi.org/10.1016/j.ceramint.2017.12.081>
Reference: CERI16961

To appear in: *Ceramics International*

Received date: 28 November 2017
Revised date: 11 December 2017
Accepted date: 12 December 2017

Cite this article as: Xiao Wu, Cengceng Fang, Jinfeng Lin, Chunwen Liu, Laihui Luo, Mei Lin, Xinghua Zheng and Cong Lin, Tetragonal Er^{3+} -doped $(\text{K}_{0.48}\text{Na}_{0.48}\text{Li}_{0.04})(\text{Nb}_{0.96}\text{Bi}_{0.04})\text{O}_3$: lead-free ferroelectric transparent ceramics with electrical and optical multifunctional performances, *Ceramics International*, <https://doi.org/10.1016/j.ceramint.2017.12.081>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Tetragonal Er^{3+} -doped $(\text{K}_{0.48}\text{Na}_{0.48}\text{Li}_{0.04})(\text{Nb}_{0.96}\text{Bi}_{0.04})\text{O}_3$: lead-free ferroelectric transparent ceramics with electrical and optical multifunctional performances

Xiao Wu^{a,*}, Cengceng Fang^a, Jinfeng Lin^a, Chunwen Liu^a, Laihui Luo^b, Mei Lin^c, Xinghua Zheng^a, Cong Lin^{a,*}

^a College of Materials Science and Engineering, Fuzhou University, Fuzhou 350108, PR China

^b Department of Microelectronic Science and Engineering, Ningbo University, Ningbo 315211, PR China

^c Department of Applied Physics, The Hong Kong Polytechnic University, Kowloon, Hong Kong, China

wuxiao@fzu.edu.cn

lincong@fzu.edu.cn

*Corresponding author.

Abstract

The lead-free Er^{3+} -doped $(\text{K}_{0.48}\text{Na}_{0.48}\text{Li}_{0.04})(\text{Nb}_{0.96}\text{Bi}_{0.04})\text{O}_3$ (KNLNB-Er-x) ceramics were fabricated by conventional pressureless sintering. They possess a tetragonal perovskite phase with dense microstructure. High transmittances of the ceramics are obtained both in the visible and infrared regions. The optical band gap energies of them are 3.07-3.11 eV, close to other KNN-based materials. The relaxor-like characteristics, good dielectric, ferroelectric and piezoelectric properties of the ceramics have been obtained. The up-conversion photoluminescence spectra have been studied and obvious color-tunable emissions have been observed by

Download English Version:

<https://daneshyari.com/en/article/7888203>

Download Persian Version:

<https://daneshyari.com/article/7888203>

[Daneshyari.com](https://daneshyari.com)