

$(\text{Na}_{0.5}\text{K}_{0.5})\text{NbO}_3$ 基无铅压电陶瓷的研究

杜红亮¹, 李智敏¹, 周万城¹, 屈绍波², 裴志斌³

(1. 西北工业大学凝固技术国家重点实验室, 西安 710072; 2. 西安交通大学电子陶瓷与器件教育部重点实验室, 西安 710049; 3. 空军工程大学理学院, 西安 710051)

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摘要 由于钙钛矿结构无铅压电陶瓷具有高的压电性能, 已成为无铅压电陶瓷研究的热点.

本文综述了钙钛矿结构无铅压电陶瓷 $(\text{Na}_{0.5}\text{K}_{0.5})\text{NbO}_3$ 的研究进展和趋势. 重点从添加第二组元、添加助烧剂、

取代改性和制备方法四个方面, 归纳和分析了 $(\text{Na}_{0.5}\text{K}_{0.5})\text{NbO}_3$ 基无铅压电陶瓷的研究开发进展, 并对

$(\text{Na}_{0.5}\text{K}_{0.5})\text{NbO}_3$ 基无铅压电陶瓷今后的研究和发展提出一些建议.

关键词 [无铅压电陶瓷](#), [钙钛矿结构](#), [压电材料](#), [\(Na0.5K0.5\)NbO3](#)

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Researches and Developments of $(\text{Na}_{0.5}\text{K}_{0.5})\text{NbO}_3$ -based Lead-free Piezoelectric Ceramics

DU Hong-Liang¹, LI Zhi-Min¹, ZHOU Wan-Cheng¹, QU Shao-Bo², PEI Zhi-Bin³

(1. State Key Laboratory of Solidification Processing, Northwestern Polytechnical University, Xi'an, 710072, China; 2. Electronic Materials Research Laboratory, Key Laboratory of Educational Ministry, Xi'an Jiaotong University, Xi'an 710049, China;

3. The College of Science, Air Force Engineering University, Xi'an, 710051, China)

Abstract Lead free piezoelectric ceramics with perovskite structure have attracted considerable attention as new piezoelectric materials because of their good piezoelectric properties. In this paper, The research progress and trend of $(\text{Na}_{0.5}\text{K}_{0.5})\text{NbO}_3$ -based ceramics were summarized and reviewed with emphasizes on the addition of new compositions and sintering aids, ions substitution and processing techniques. The future research works for the developments of $(\text{Na}_{0.5}\text{K}_{0.5})\text{NbO}_3$ -based lead free piezoelectric ceramics were also suggested.

Key words [lead free piezoelectric ceramics](#) [perovskite structure](#) [piezoelectric materials](#)

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通讯作者 杜红亮 duhongliang@126.com

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