

Supporting Information:

Enhancing energy storage density in Lead-Free BiFeO₃-Based relaxor ferroelectric ceramics through multiple optimization designs

Hengtong Zhao^{a,b}, Pei Han^{a,b*}, Tiantian Zhang^{a,b}, Hao Li^{a,b}, Jianhua Wu^{a,b}, Liwen Zhang^{a,b}, Jinhua Du^{a,b}, Junyan Zhang^{a,b}, Ye Zhao^{a,b*}, Yunying Liu^{a,b*}, Yong Li^{a,b*}

^a Inner Mongolia Key Laboratory of Advanced Ceramic Materials and Devices, School of Materials Science and Engineering, Inner Mongolia University of Science and Technology, Baotou 014010, China

^b Key Laboratory of Green Extraction and Efficient Utilization of Light Rare-Earth Resources (Inner Mongolia University of Science and Technology), Ministry of Education, Baotou 014010, China

Corresponding authors

E-mail addresses: solidking@163.com (Pei Han), yzhao@imust.edu.cn, (Ye Zhao), liu_yunying@126.com (Yunying Liu), liyong3062545@126.com (Yong. Li)

Keywords: Energy storage, BiFeO₃, Relaxor ferroelectric, PNRs

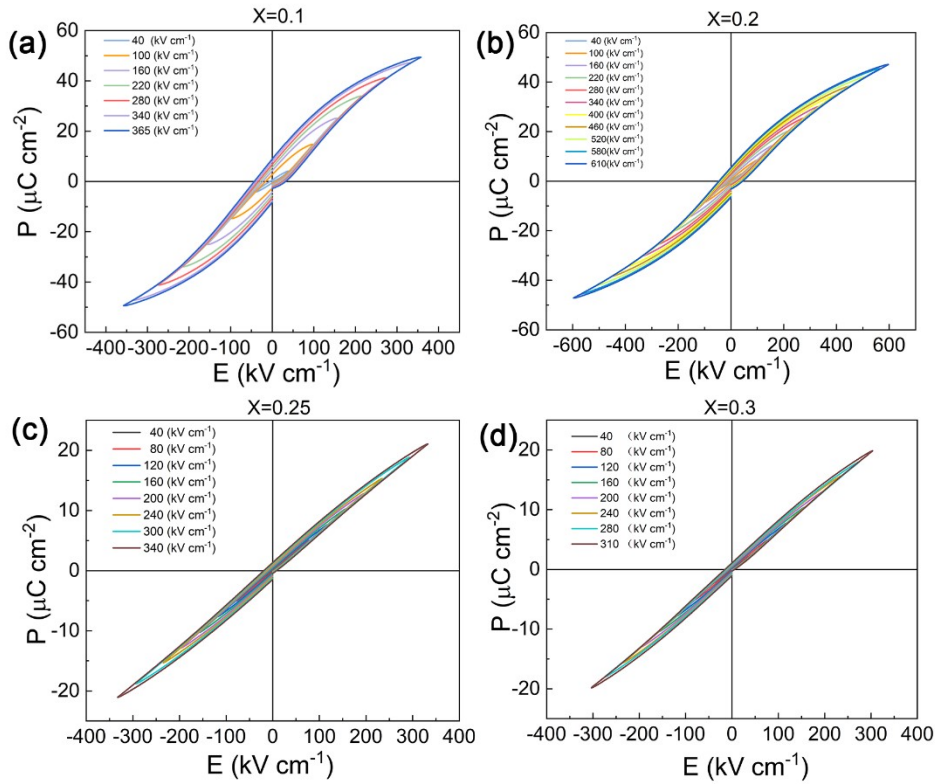


Figure S1. Variation in P-E loops with increasing electric field for BF-BT-CCN ceramics;(a) $x=0.1$ (b) $x=0.2$ (c) $x=0.25$ (d) $x=0.3$

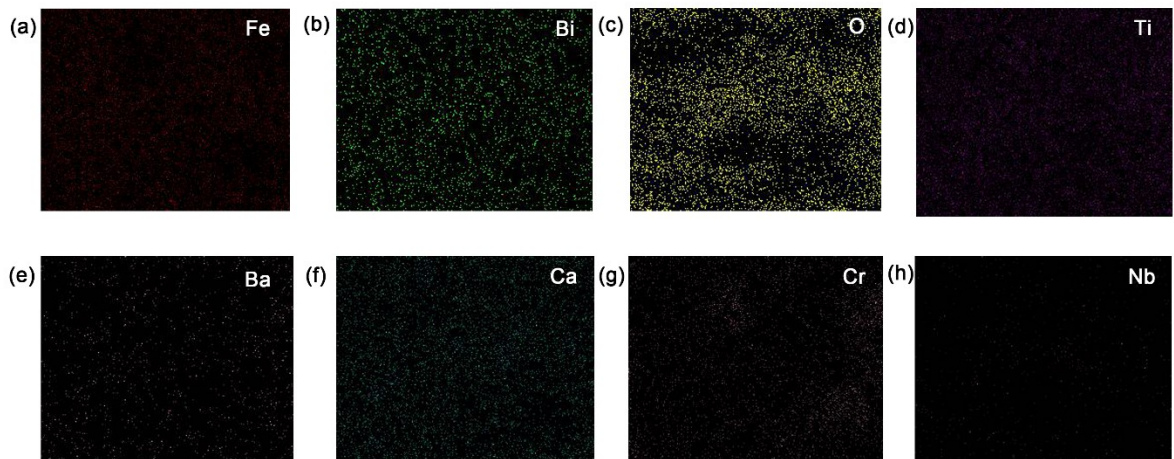


Figure S2. EDS mapping images of BF-BT-0.2CCN.

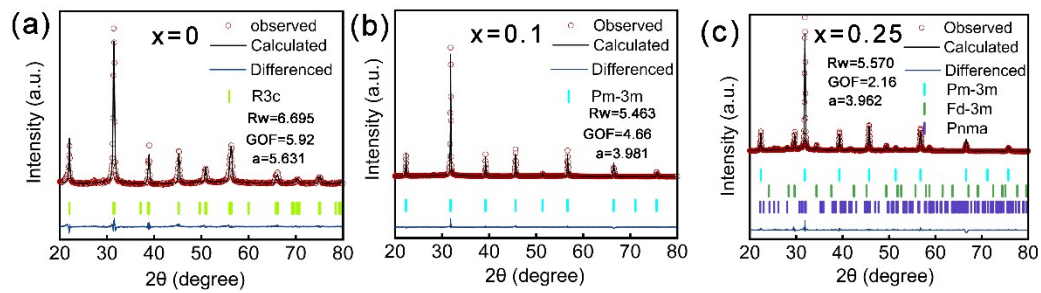


Figure S3. Refinement of XRD.