

Supplementary Information for

Superior piezoelectricity and resistivity in $\text{CaBi}_2\text{Nb}_2\text{O}_9$ high-temperature piezoelectric ceramics: Synergy of structural distortion and weak textured

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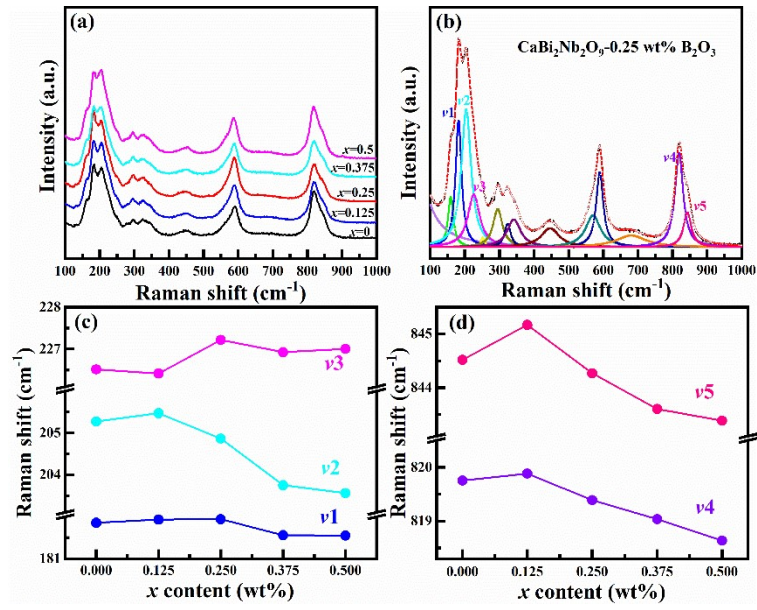


Fig. S1 (a) Raman patterns of $\text{CaBi}_2\text{Nb}_2\text{O}_9-x \text{ wt}\% \text{ B}_2\text{O}_3$ ceramics at room temperature.

(b) Lorentz peak fitting of Raman pattern for $\text{CaBi}_2\text{Nb}_2\text{O}_9-0.25 \text{ wt}\% \text{ B}_2\text{O}_3$ ceramics.

Wave number of Raman peaks with (c) ν_1 , ν_2 , ν_3 and (d) ν_4 and ν_5 .

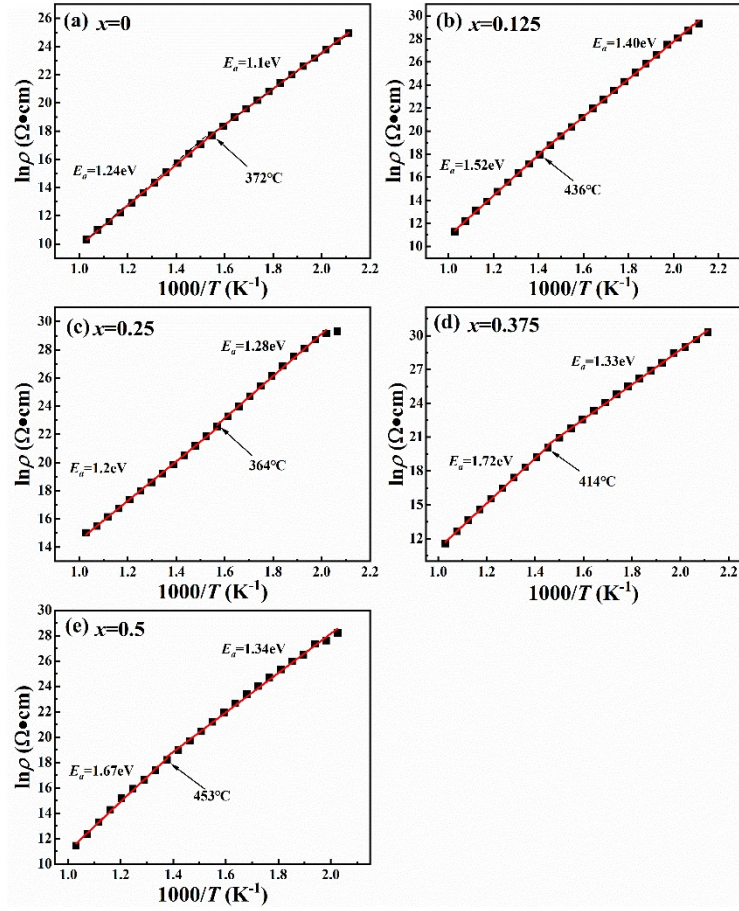


Fig. S2 Arrhenius plots of all the samples.

Table S1. Atomic coordinates of pure CBNO and CaBi₂Nb₂O₉-0.25 wt% B₂O₃.

		CBNO				CBNO-0.25wt% B ₂ O ₃			
atom	site	x	y	z	Occ	x	y	z	Occ
Ca1	4	0.253	0.745	0.5	0.891	0.245	0.739	0.5	0.858
Bi1	4	0.253	0.745	0.5	0.109	0.245	0.739	0.5	0.142
Ca2	8	0.260	0.734	0.701	0.038	0.249	0.744	0.700	0.085
Bi2	8	0.260	0.734	0.701	0.962	0.249	0.744	0.700	0.915
Nb	8	0.280	0.255	0.585	1	0.282	0.227	0.583	0.999
O1	4	0.314	0.164	0.5	1	0.302	0.152	0.5	1
O2	8	0.295	0.318	0.656	1	0.311	0.314	0.657	1
O3	8	0.485	0.501	0.249	1	0.513	0.503	0.247	1
O4	8	0.511	0.537	0.562	1	0.538	0.531	0.565	1
O5	8	0.602	0.055	0.584	1	0.610	0.04	0.586	1
B	8					0.282	0.227	0.583	0.001