Supporting Information

Approaching piezoelectric response of Pb-piezoelectrics in hydrothermally synthesized $Bi_{0.5}(Na_{1-x}K_x)_{0.5}TiO_3$ nanotubes

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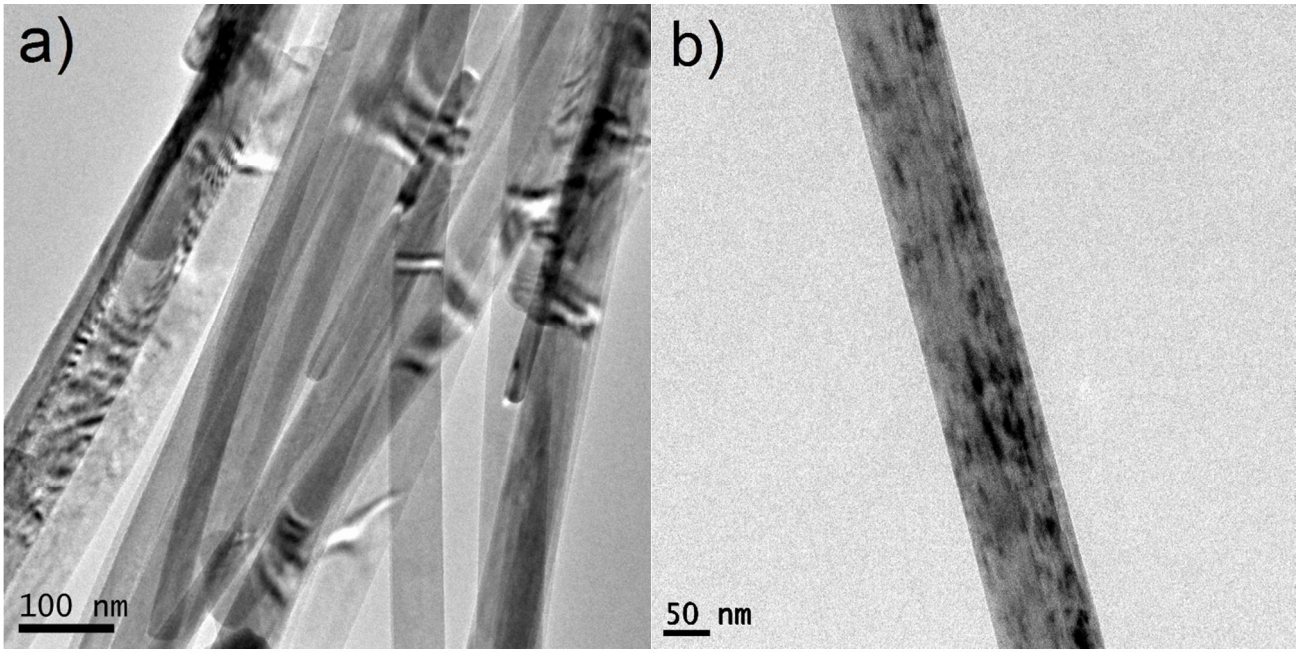

Figure S1. Bright field TEM images of a) a bunch of BNKT1 nanofibers and b) a single BNKT1 nanofiber.

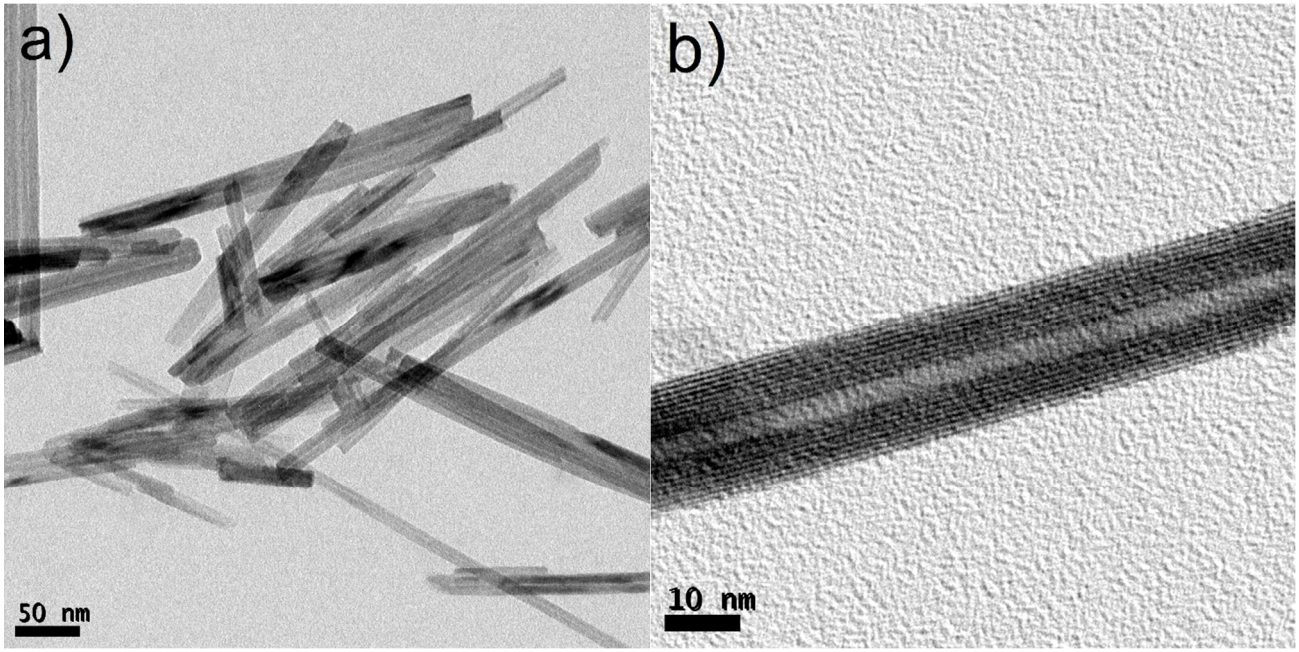

Figure S2. Bright field TEM image of a) a bunch of BNKT3 nanotubes and b) a single BNKT3 nanotube.

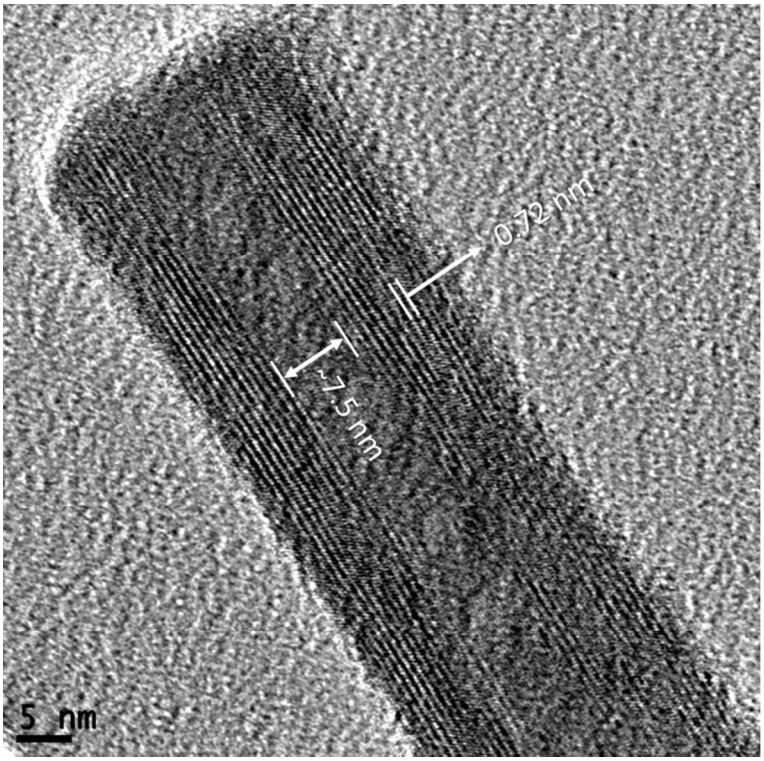

Figure S3. HR-TEM image of a BNKT2 nanotube with an inner diameter and interplanar distance of 7.5 nm and 0.72 nm, respectively.

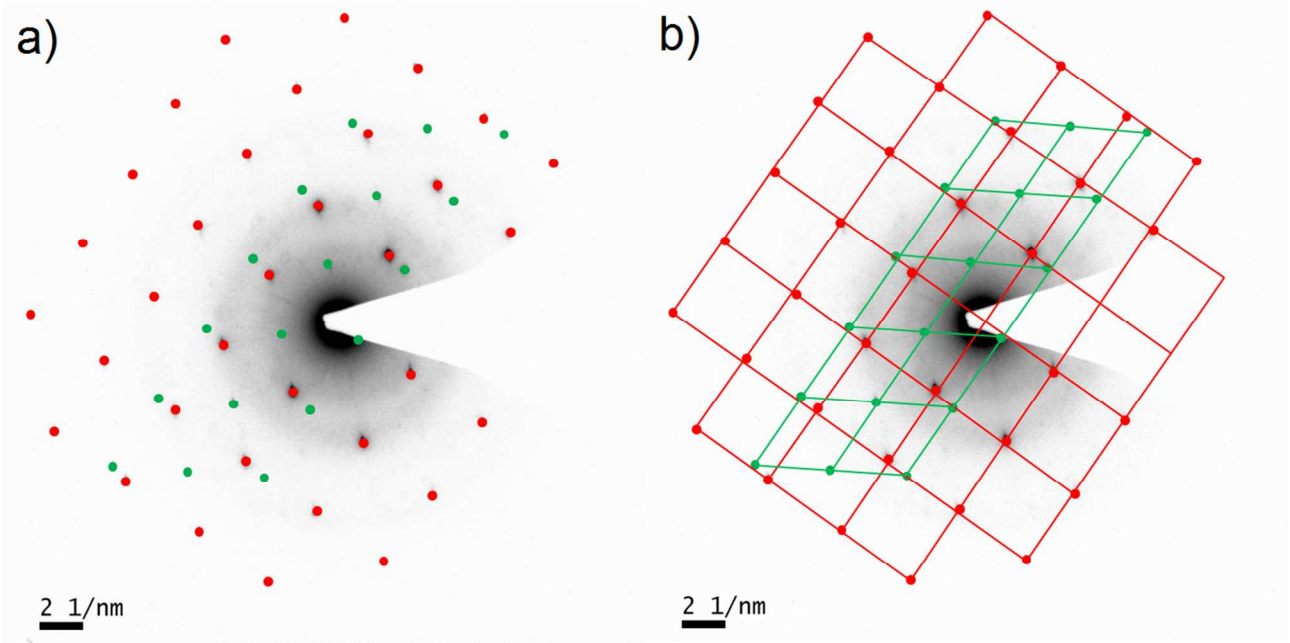

Figure S4. a) Inverted colour SAED map and, b) orthorhombic (green) and tetragonal (red) patterns of a BNKT2 nanotube.

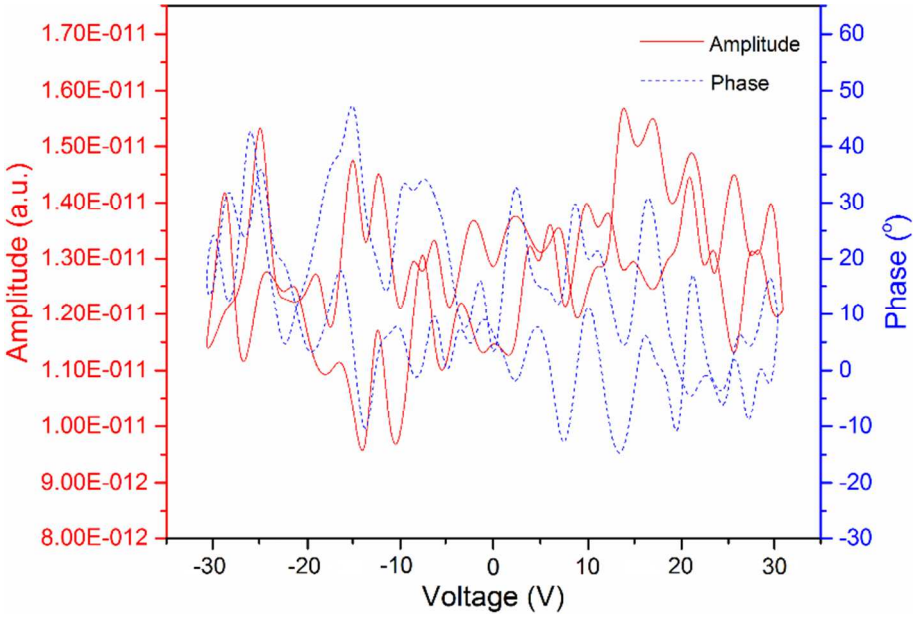

Figure S5. The amplitude and phase graphs of Si substrate as reference.

Table S1. Fitting Parameters of 1D slices from the ^{23}NA MQMAS NMR using DMFIT software.

BNKT1

Slice (ppm)	Model	Position (ppm)	δCS	νQ (kHz)	ηQ
-15	CzSimple	-14.55	1.95	353.81	-
-11	CzSimple	-11.55	2.45	263.52	-
-8	CzSimple	-9.2	2.32	472.68	-
	CzSimple	-10.67	5.15	320.94	-
-4	Q mas 1/2	-4.5	-	850	1
	Q mas 1/2	-7.46	-	1085.9	0.38

BNKT2

Slice (ppm)	Model	Position (ppm)	δCS	νQ (kHz)	ηQ
-18	CzSimple	-17	2.12	306.92	-
-15	CzSimple	-14.2	2.12	426.92	-
-12	CzSimple	-12.12	2.58	322.61	-
-11	CzSimple	-11.12	2.57	408.63	-
	Q mas 1/2	-6.75	-	630.84	0.64
-5	Q mas 1/2	-4.5	-	850	1
	Q mas 1/2	-7.46	-	1085.9	0.38

BNKT3

Slice (ppm)	Model	Position (ppm)	δCS	νQ (kHz)	ηQ
-18	CzSimple	-16.38	2.33	416.86	-
-15	CzSimple	-14.31	2.29	429.28	-
-13	CzSimple	-12.78	2.32	472.68	-
-8	CzSimple	-9.2	2.32	472.68	-
	CzSimple	-10.7	4.23	576.82	-
-5	Q mas 1/2	-4.5	-	850	1
	Q mas 1/2	-7.46	-	1085.9	0.38