Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.

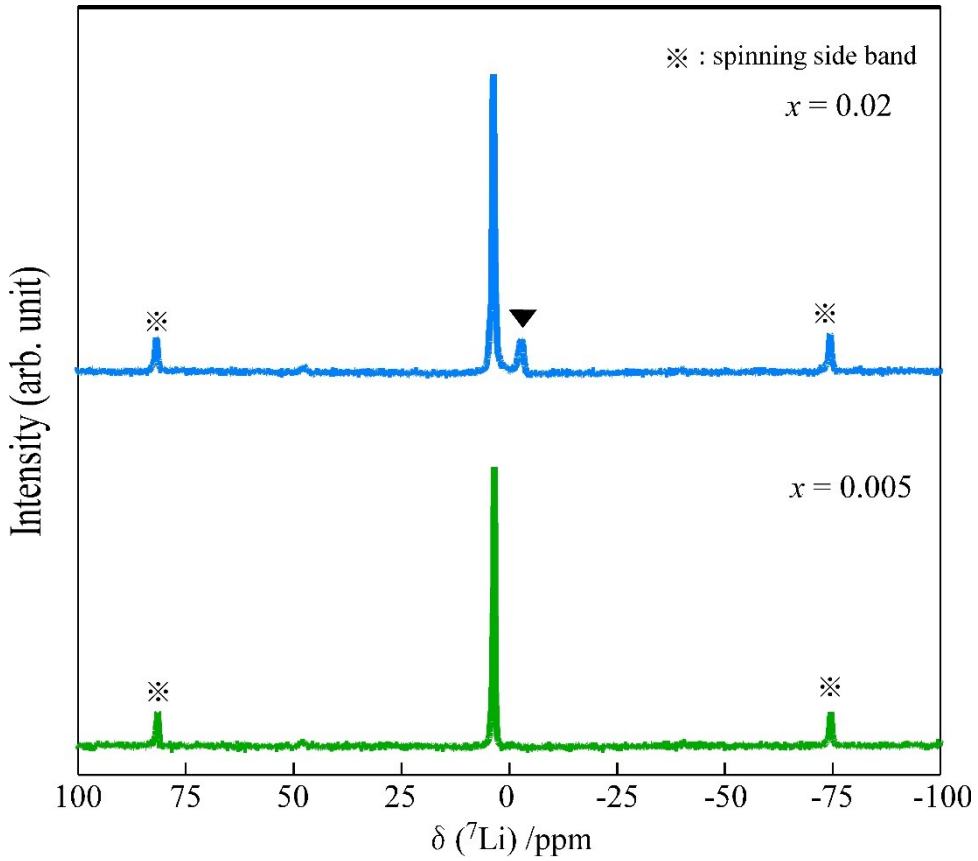

Fig. 1S. ^{7}Li solid state NMR spectra of (1-*x*)KNN-*x*BaLN ceramics at x = 0.005 and 0.02. Strong signal of ^{7}Li around 4 ppm in both the compositions is due to the Li^{+} cation in (1-*x*)KNN-*x*BaLN ceramics, while the weak signal around -3 ppm (marked as ▼) at x = 0.02 is attributed to the presence of minor secondary phase.

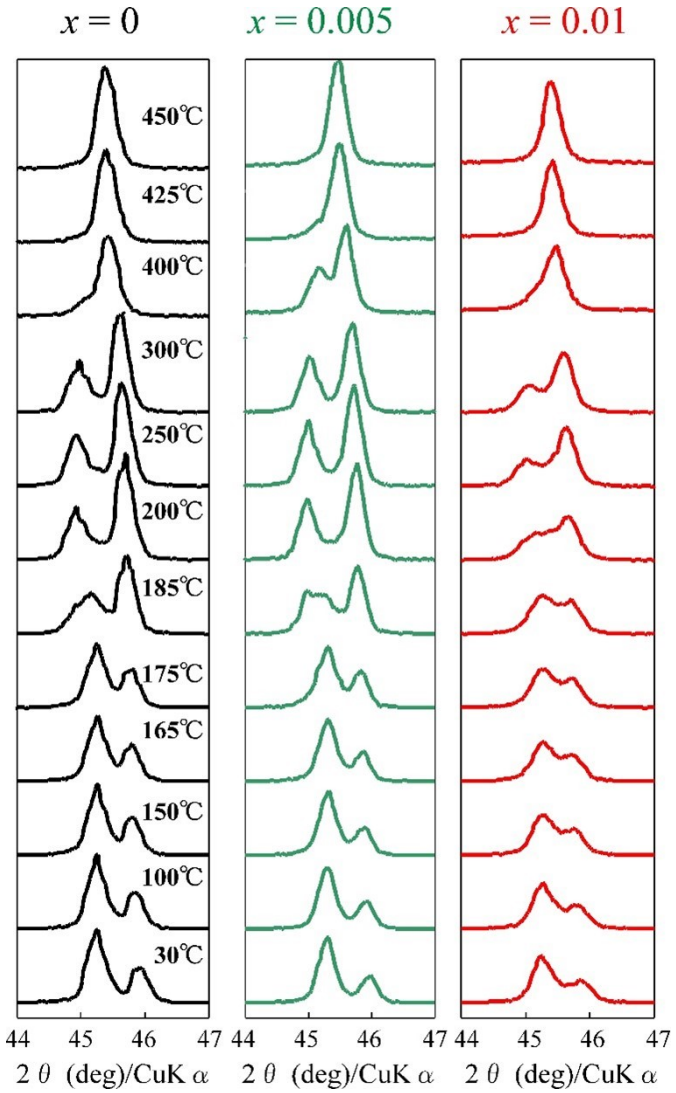

Fig. 2S. XRPD patterns of (1-*x*)KNN-*x*BaLN ceramics (*x* = 0, 0.005, and 0.01) in 2θ range of 44-47 degree measured at 30-450 ℃ after forged for 10 min at each temperature, suggesting the phase transition behavior from orthorhombic to tetragonal phase at the temperatures ranging from 185 ℃ to 200 ℃ and the presence of cubic phase above T_c.

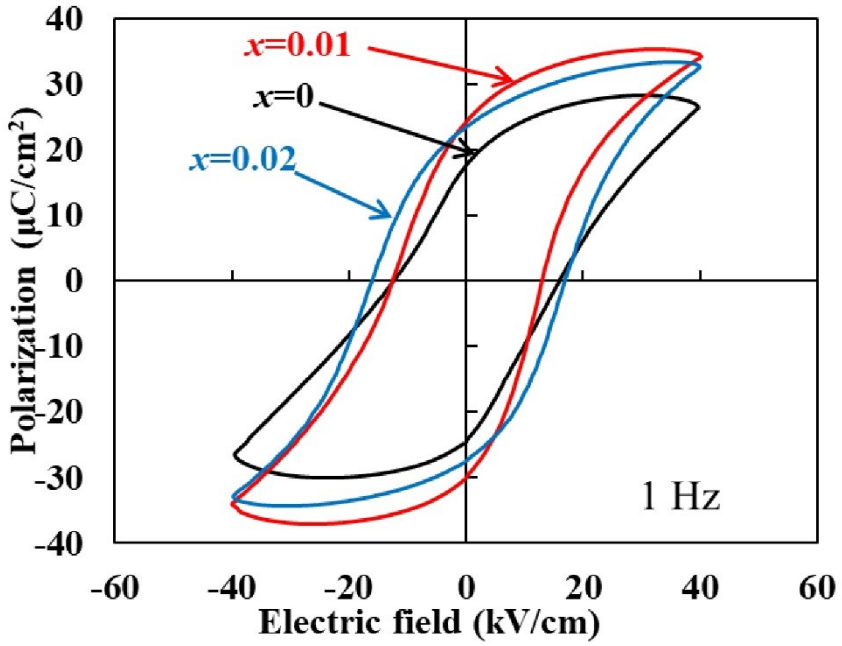

Fig. S3. *P*-*E* hysteresis loops of (1-*x*)KNN-*x*BaLN ceramics with different compositions measured at 1 Hz.