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Achieving excellent energy storage performance with thermal stability in lead-free $AgNbO_3$ ceramics

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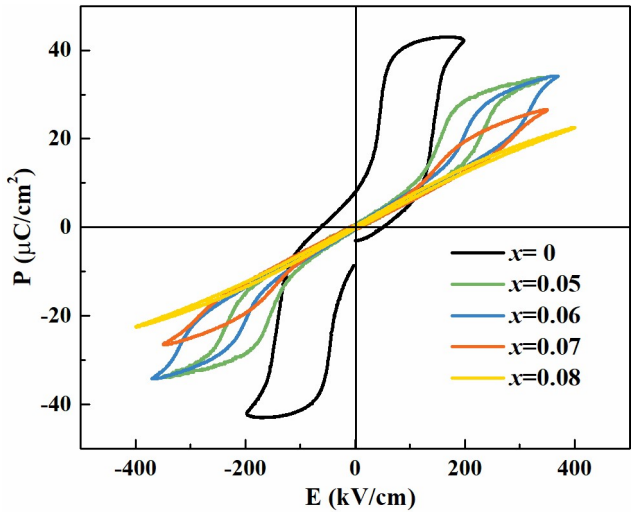

Fig. S1 The full hysteresis loops of the SAN*x* ceramics

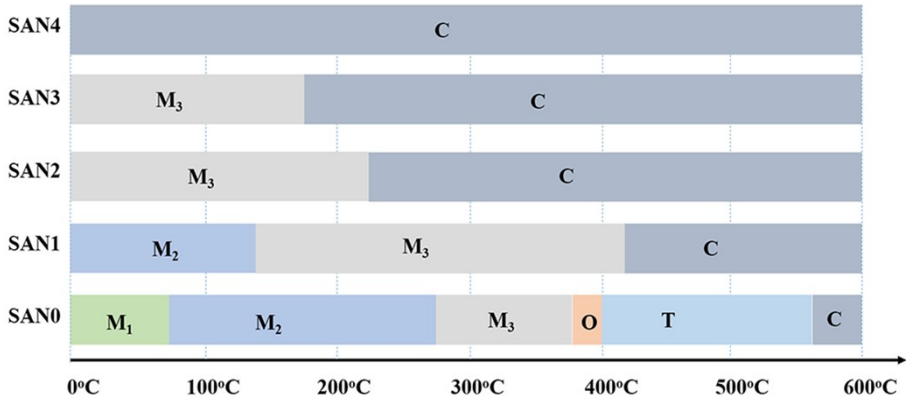

Fig. S2 Phase diagram of SAN*x* ceramics.

Table S1 The average ionic radii of A and B-sites cations and tolerance factor of SAN*x* ceramics.

Composition (*x*)	$R_{A\text{-site}}$ (Å)	$R_{B\text{-site}}$ (Å)	Tolerance factor
0	1.280	0.64	0.927
0.05	1.142	0.64	0.880
0.06	1.114	0.64	0.870
0.07	1.087	0.64	0.860
0.08	1.059	0.64	0.851

Table S2 The crystal and refined parameters of SAN*x* ceramics.

Compositions (*x*)	0	0.05	0.06	0.07	0.08
Space group	Pbcm	Pbcm	Pbcm	Pbcm	Pbcm
Unit cell dimensions	a=5.5465Å b=5.6025 Å c=15.6370 Å	a=5.5427Å b=5.5819 Å c=15.6675 Å	a=5.5345Å b=5.5789 Å c=15.6743 Å	a=5.5324Å b=5.5693 Å c=15.6813 Å	a=5.5258Å b=5.56 Å c=15.6882 Å
Volume	485.90Å^3	484.7Å^3	484Å^3	483.2Å^3	482Å^3
Refining parameters	R_{wp}=0.0650 R_p =0.0450	R_{wp}=0.0731 R_p =0.0537	R_{wp}=0.0633 R_p =0.0462	R_{wp}=0.0650 R_p =0.0478	R_{wp}=0.0686 R_p =0.0492

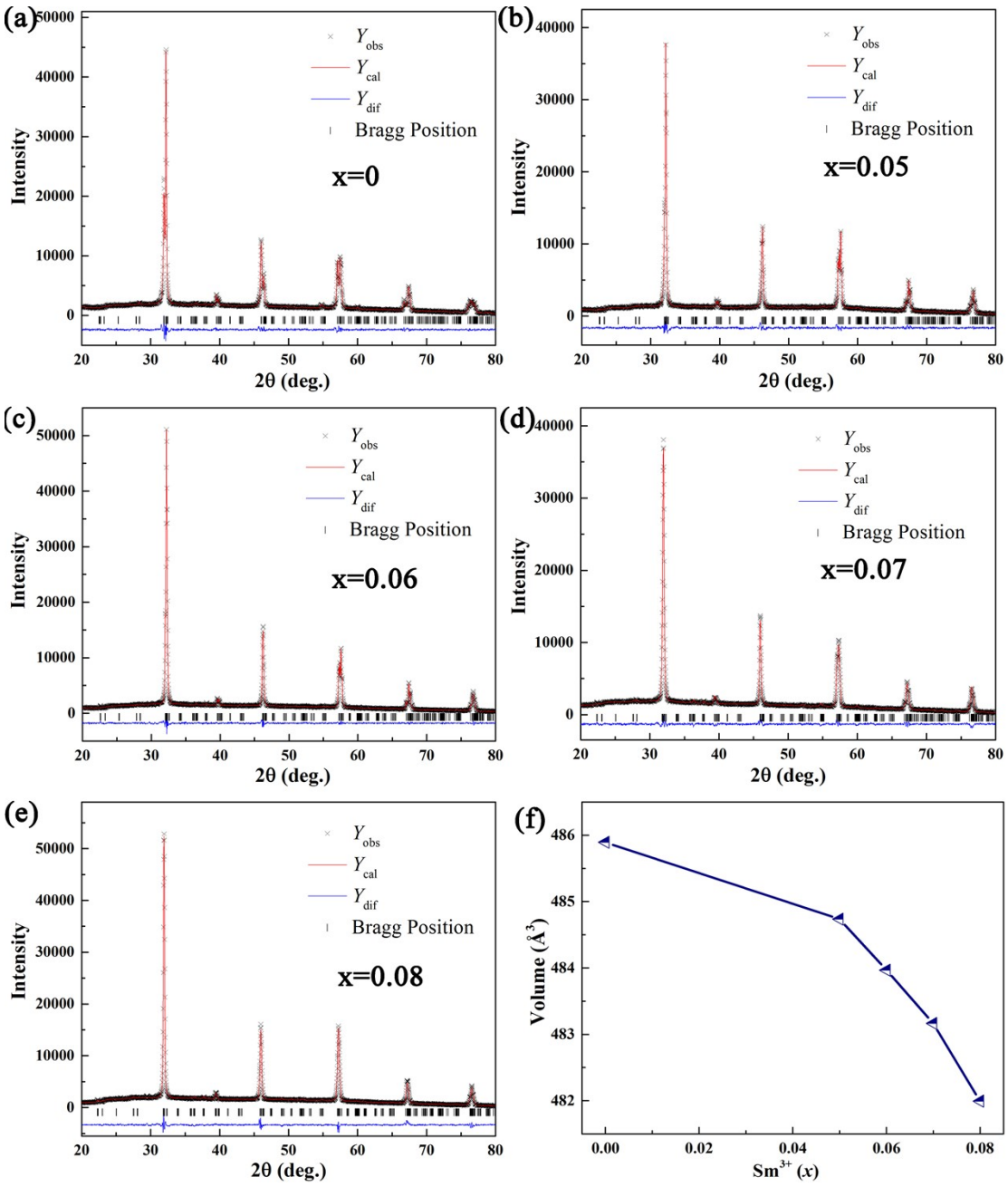

Fig. S3 (a)-(e) The Rietveld refinement based on space group of Pbcm of SAN*x* ceramics, showing observed (cross), calculated (line) and difference (lower) profiles; (f) The cell volume as a function of Sm^{3+} content.

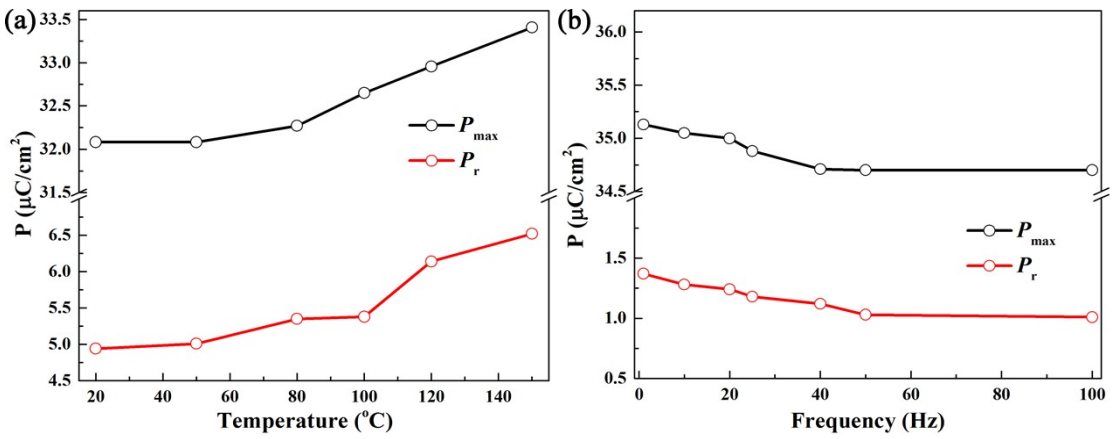

Fig. S4 P_{max} and P_r at different (a) temperatures and (b) frequencies.