Supplementary Material

Enhanced Energy Storage Performance in Reaction-Sintered $AgNbO_3$ Antiferroelectric Ceramic

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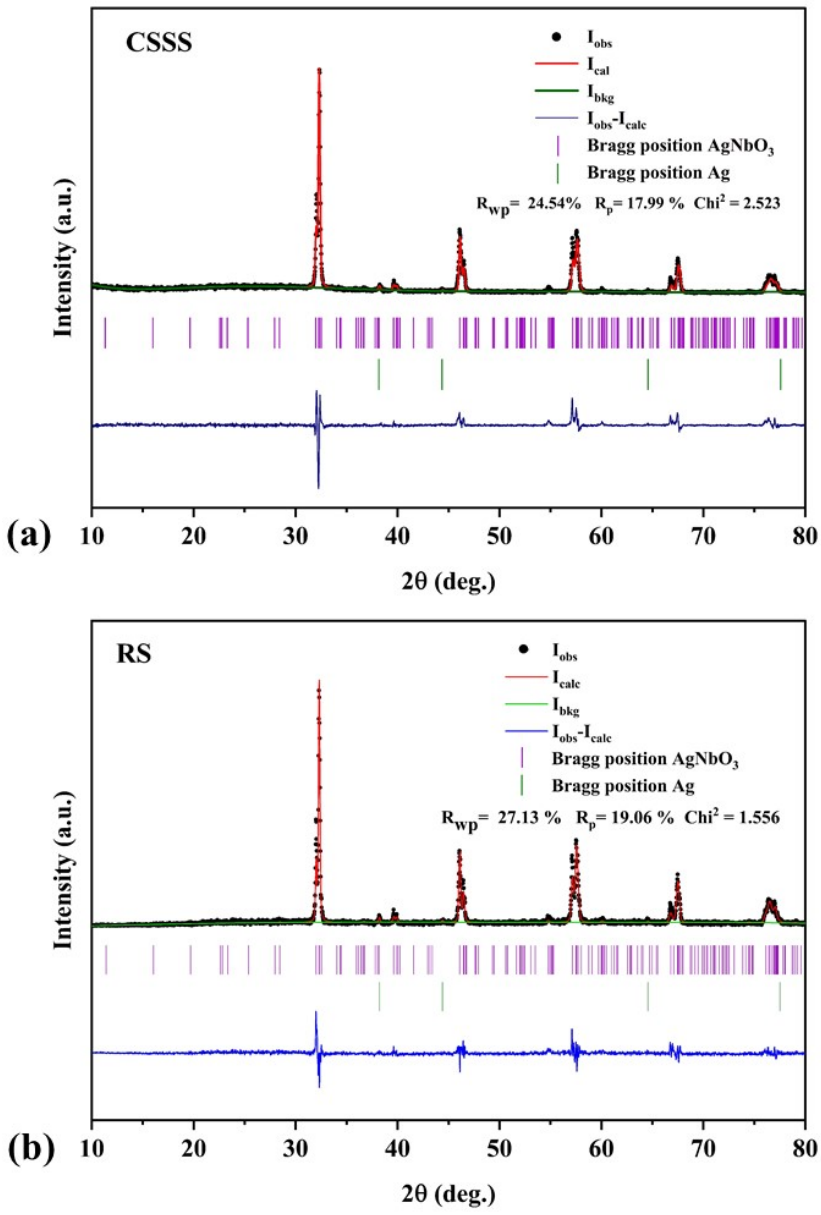

Figure S1. Rietveld Refinement patterns of CSSS and RS ceramics.

Table S1. Room-temperature atomic coordinates and isotropic displacement parameters of CSSS and RS ceramics with the Pbcm space group using Rietveld refinements.

Sample	Atom	Site	x	y	z	Uiso
CSSS	Ag1	4d	0.749237	0.248225	0.750000	0.01855
	Ag2	4c	0.748537	0.250000	0.500000	0.01855
	Nb	8e	0.751108	0.746858	0.624110	0.01628
	O4	4d	0.697855	0.751579	0.750000	0.00614
	O5	4c	0.808355	0.750000	0.500000	0.00614
	O6	8e	0.465955	0.523079	0.613041	0.00614
	O7	8e	0.964255	0.459379	0.640741	0.00614
RS	Ag1	4d	0.753444	0.231446	0.750000	0.02574
	Ag2	4c	0.752744	0.250000	0.500000	0.02574
	Nb	8e	0.752193	0.736737	0.625672	0.02387
	O4	4d	0.709360	0.768571	0.750000	0.03675
	O5	4c	0.819860	0.750000	0.500000	0.03675
	O6	8e	0.477460	0.540071	0.621486	0.03675
	O7	8e	0.975760	0.476321	0.649186	0.03675

Table S2. Lorentzian isotropic crystallite size broadening (LX) resulting from Rietveld refinement for CSSS and RS ceramics

Sample	LX	Uncertainty of LX	Crystallite size (nm)
CSSS	5.216	0.217	184.2
RS	4.312	0.094	152.3

The equation used to calculate the crystallite size is as follows:

$$\text{Crystallite size} = (18000*K*\lambda)/(\pi*LX)$$

where K is the Scherrer constant (0.9) and λ=1.5406 Å.

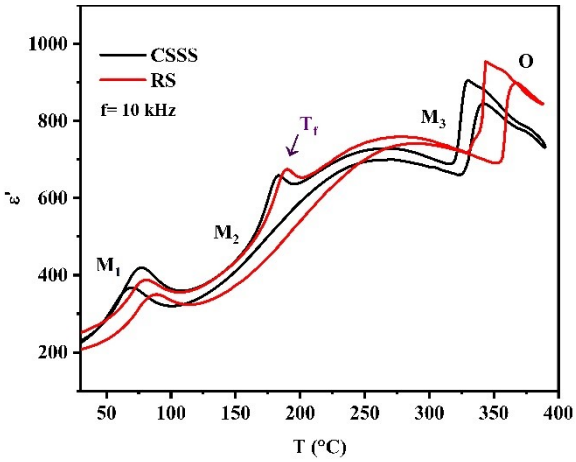

Figure S2. Temperature dependence of the real part of the dielectric permittivity (ε′) at 10 kHz in a heating and cooling cycle.

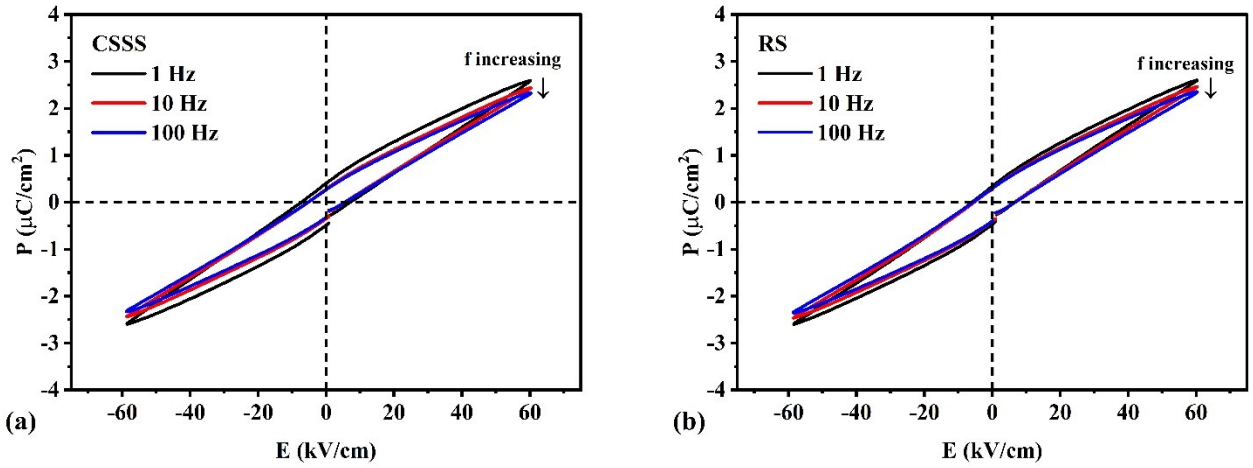

Figure S3. Frequency dependent polarization for CSSS and RS under an E= 60 kV/cm at room temperature.