

Supplementary Information

High energy-storage performance in PLZS antiferroelectric multilayer ceramic capacitors

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Table S1 The ratios of the component in the tape-casting slurry

Function	Component	Content (wt%)
Powder	PLZS	59.6
Solvent	Toluene/ethanol	31.0
Dispersant	Phosphate ester	0.6
Binder	Polyvinyl butyral	5
Plasticizer	Polyethylene glycol-400	1.2
Plasticizer	Benzyl butyl phthalate	1.2
Homogenizer	Cyclohexanone	1.4

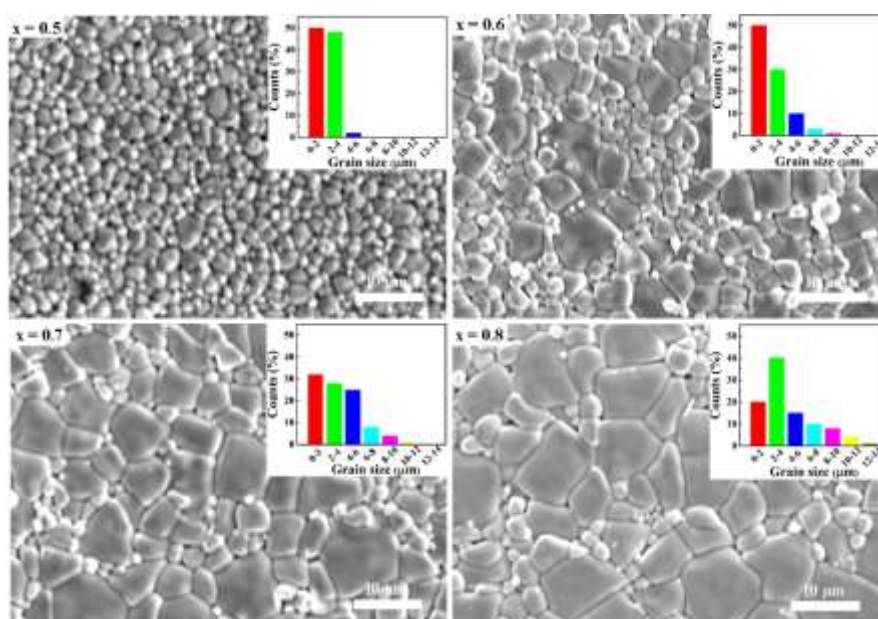


Fig. S1 SEM images of PLZS ceramics with different Zr contents and the corresponding grain size distributions.

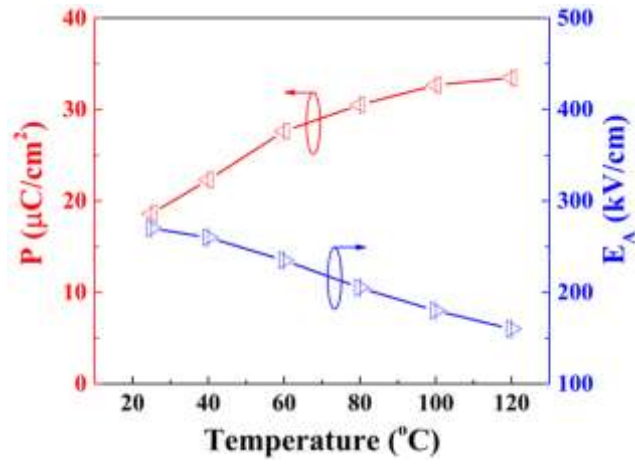


Fig. S2 The P_{\max} and E_A of the MLCC with $x = 0.7$ with different temperature.

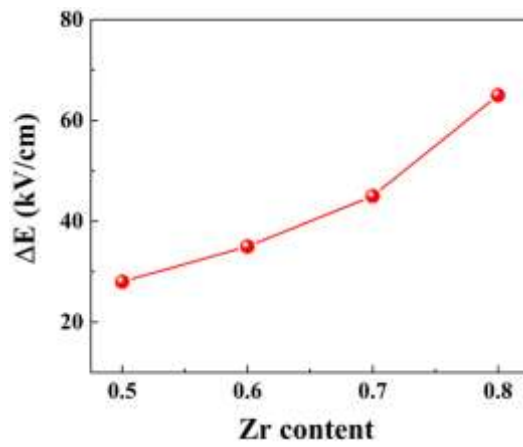


Fig. S3 The ΔE of the PLZS ceramics with different Zr contents under the 310 kV cm^{-1} .

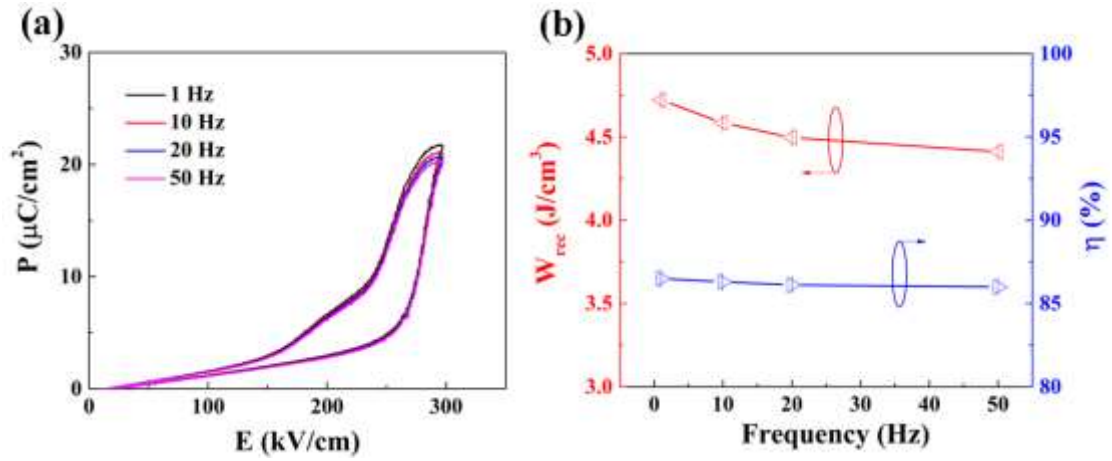


Fig. S4 Frequency-dependent P - E loops of the MLCC with $x = 0.7$ measured at 300 kV cm^{-1} and room temperature, (b) the corresponding W_{rec} and η at various frequencies.

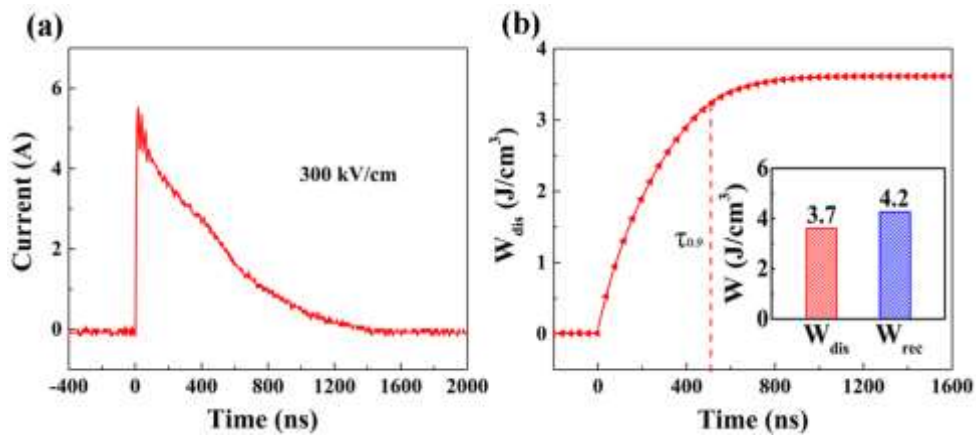


Fig. S5 (a) The pulsed discharge current of the MLCC with $x = 0.7$ under 300 kV cm^{-1} . (b) The time dependence of the discharge energy density of the MLCC with $x = 0.7$ under 300 kV cm^{-1} .