

## Improved energy storage performance of sandwich-structured P(VDF-HFP)-based nanocomposites by the additions of inorganic nanoparticles

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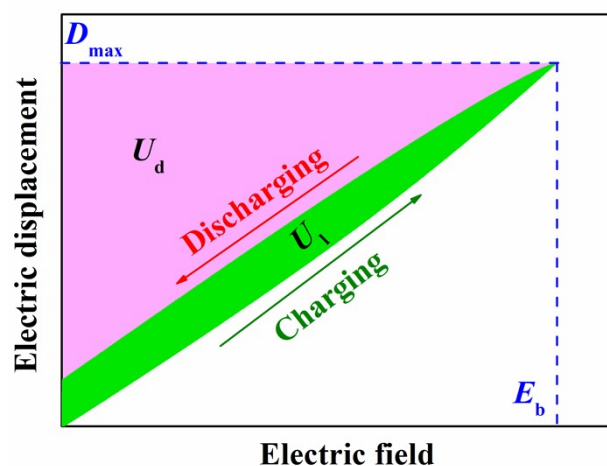


Fig.S1. Schematic diagram of hysteresis loop of nonlinear dielectric.

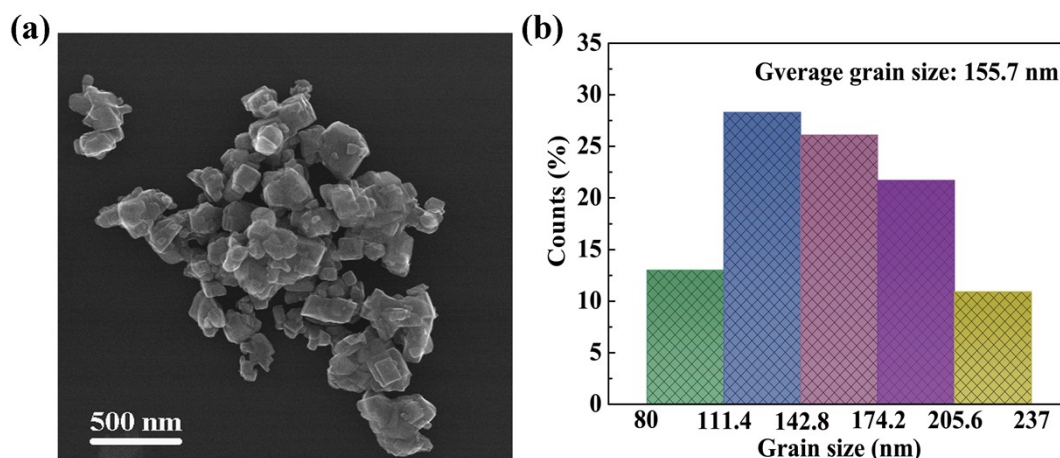
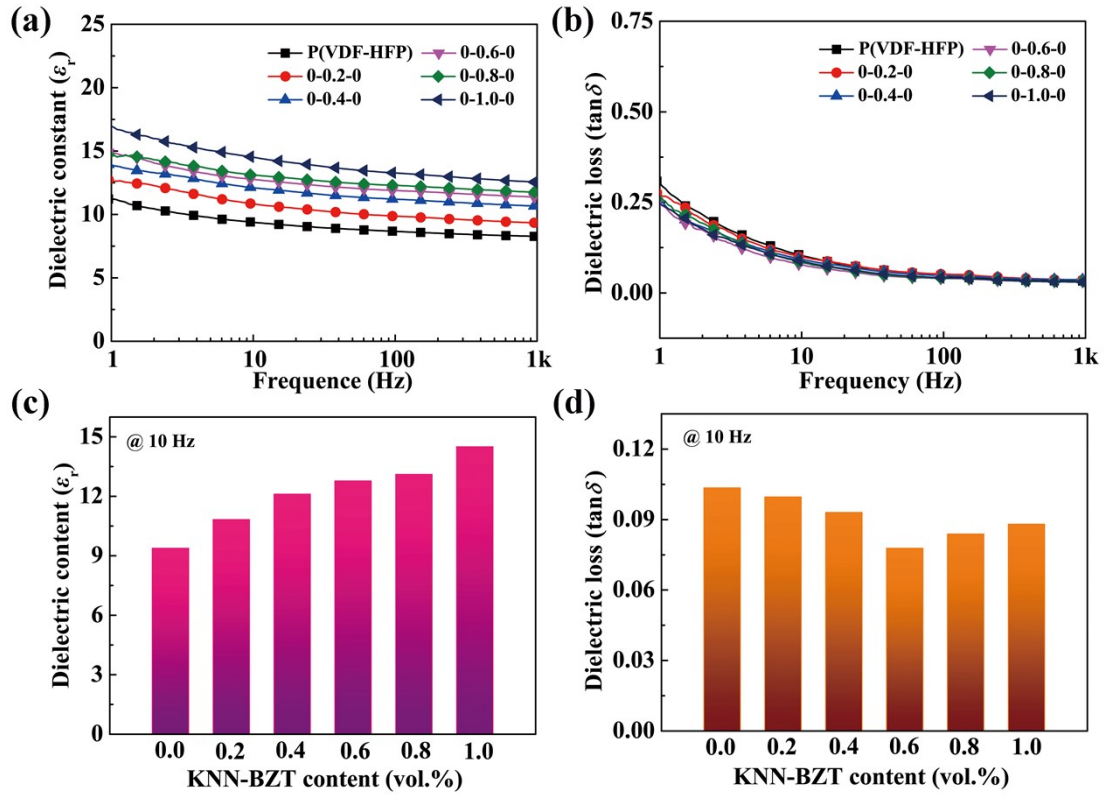
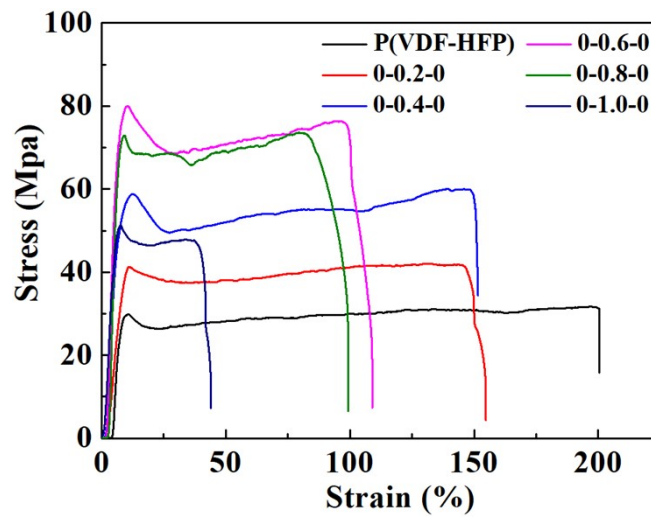


Fig.S2. TEM image (a) and grain size distribution (b) of KNN-BZT nanoparticles.

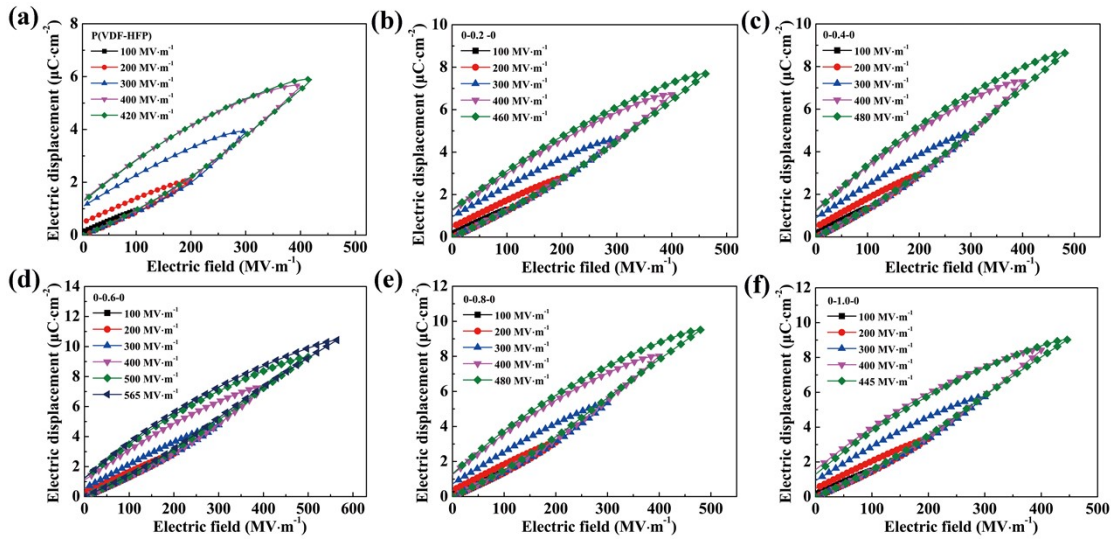
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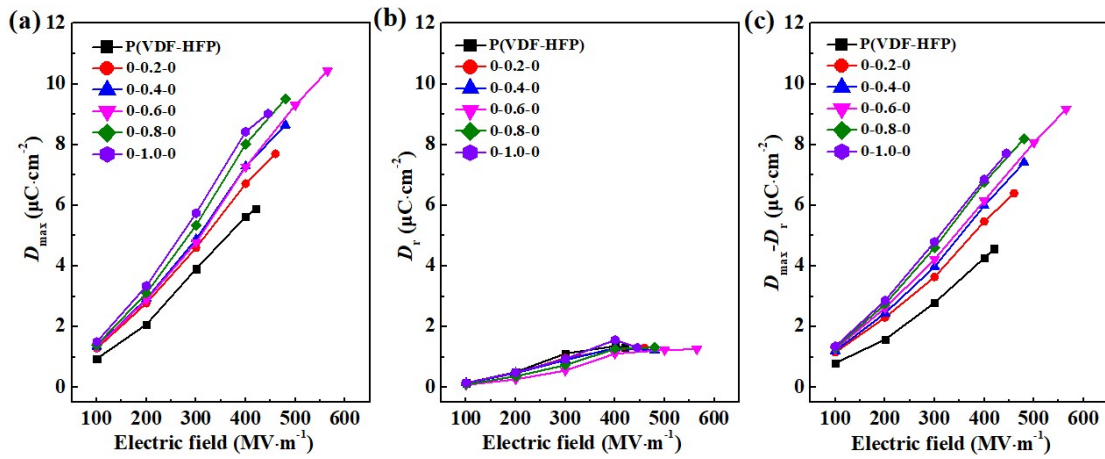
**Fig.S3.** (a) and (b) Dielectric properties of sandwich-structured nanocomposites at 1 Hz-1 kHz. (c) and (d) are the dielectric constants and losses of nanocomposites at 10 Hz.



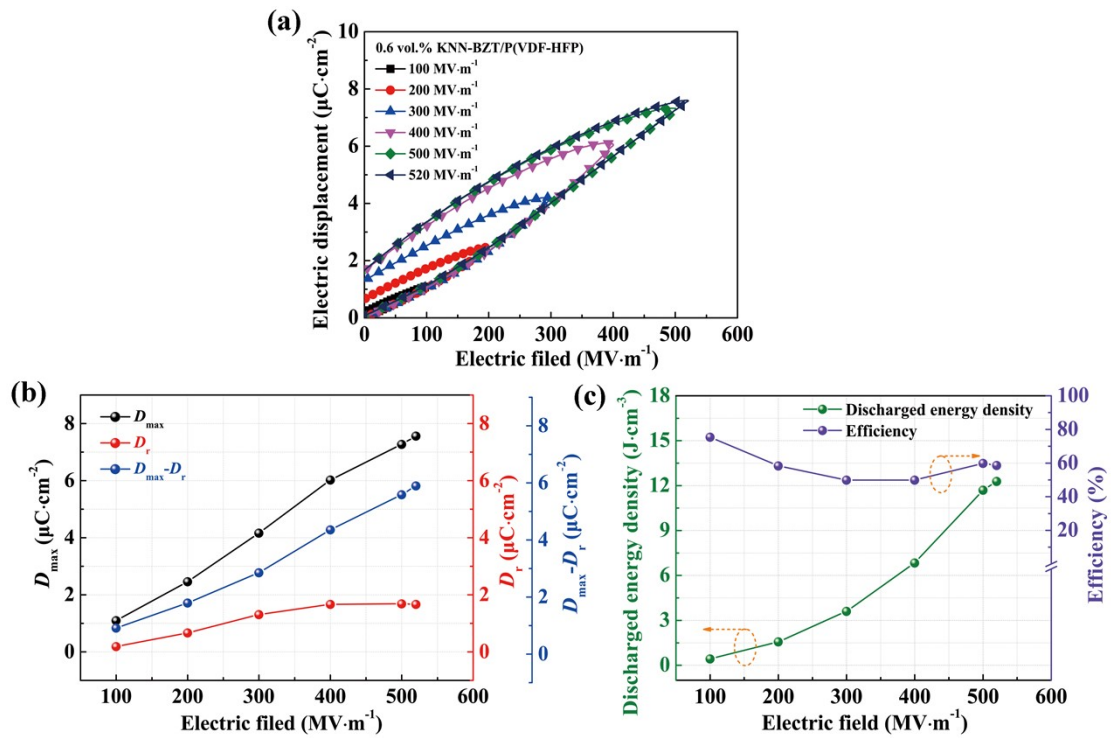
**Fig.S4.** Stress-strain curves of sandwich-structured nanocomposites.



**Fig.S5.** Hysteresis loops of sandwich-structured nanocomposites under different electric fields.



**Fig.S6.**  $D_{\max}$ ,  $D_r$  and  $D_{\max} - D_r$  of sandwich-structured nanocomposites under different electric fields.



**Fig.S7.** Single-layer 0.6 vol.% KNN-BZT/P(VDF-HFP) nanocomposites: (a) Hysteresis loops; (b)  $D_{\text{max}}$ ,  $D_{\text{r}}$  and  $D_{\text{max}} - D_{\text{r}}$ ; (c) Discharged energy density and efficiency.