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High-temperature dielectric polymer composite films of all-organic PVDF/ABS with excellent energy storage performance and stability

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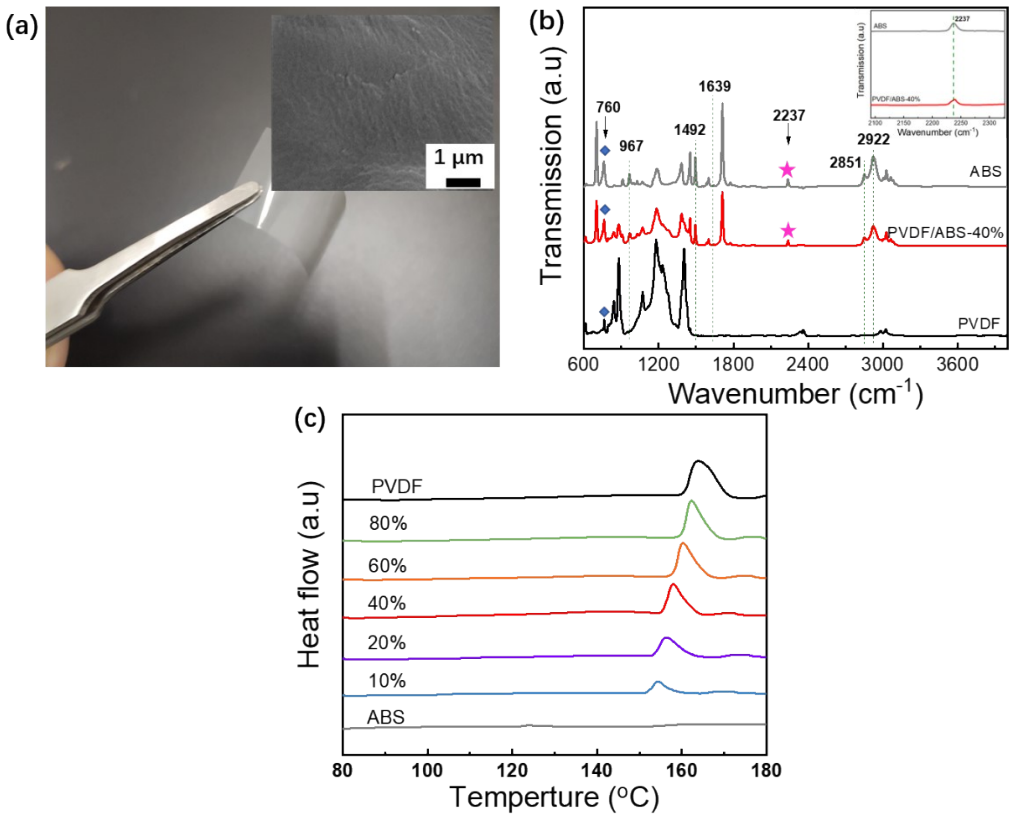

Fig. S1 The optical image of the PVDF/ABS-40% (a), the FTIR patterns of PVDF, PVDF/ABS-40% and ABS (b), DSC cures of ABS, PVDF and PVDF/ABS composite films (c), the insert in Fig. S1a is the cross-section SEM image of PVDF/ABS-40%, the insert in Fig. S1b is the amplification at the position of 2237 cm^{-1}

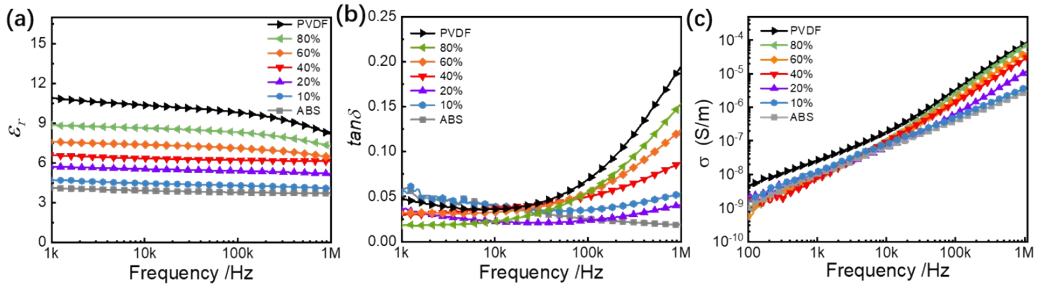

Fig. S2 Frequency dependence of ε_r (a), $tan\delta$ (b), σ (c), ε_r and $tan\delta$ at 1 kHz (d) of ABS, PVDF and ABS/PVDF composite films at room temperature

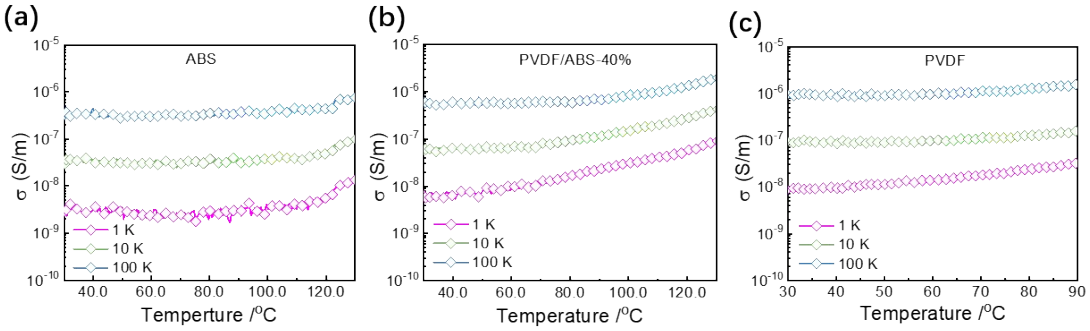

Fig. S3 The σ as a function of temperature at frequencies of 1 kHz, 10 kHz and 100 kHz for ABS, PVDF/ABS-40%and PVDF

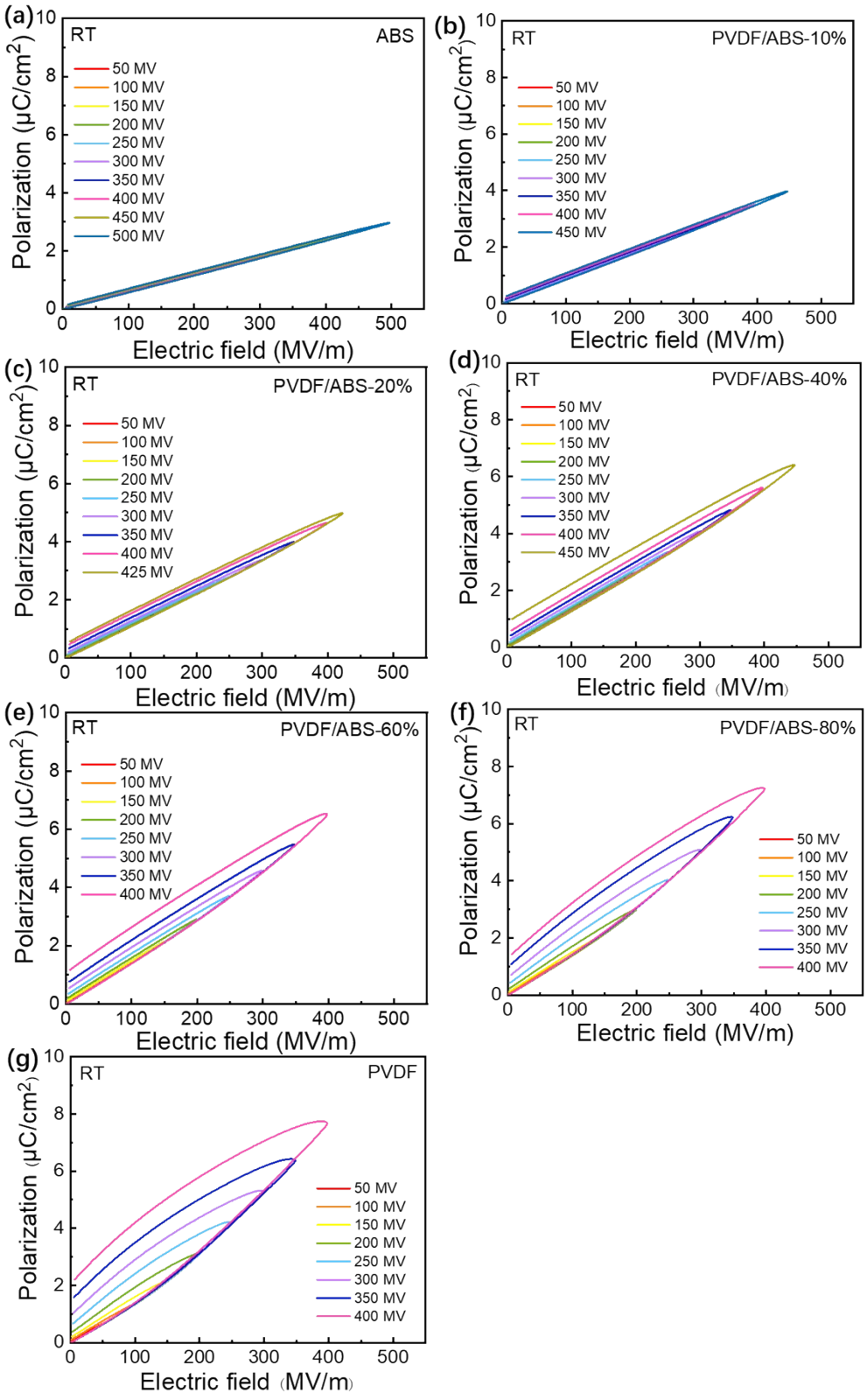

Fig. S4 The *P-E* loops of ABS, ABS/PVDF composite films and PVDF at room temperature

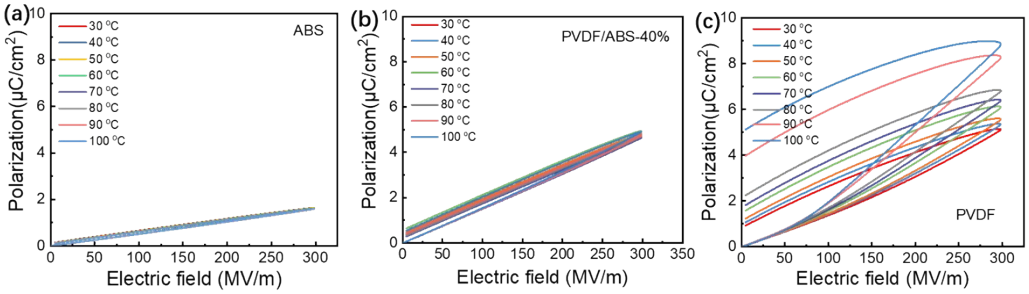

Fig. S5 The *P-E* loops as functions of temperature of ABS (a), PVDF/ABS-40% (b) and PVDF (c) under 300 MV/m

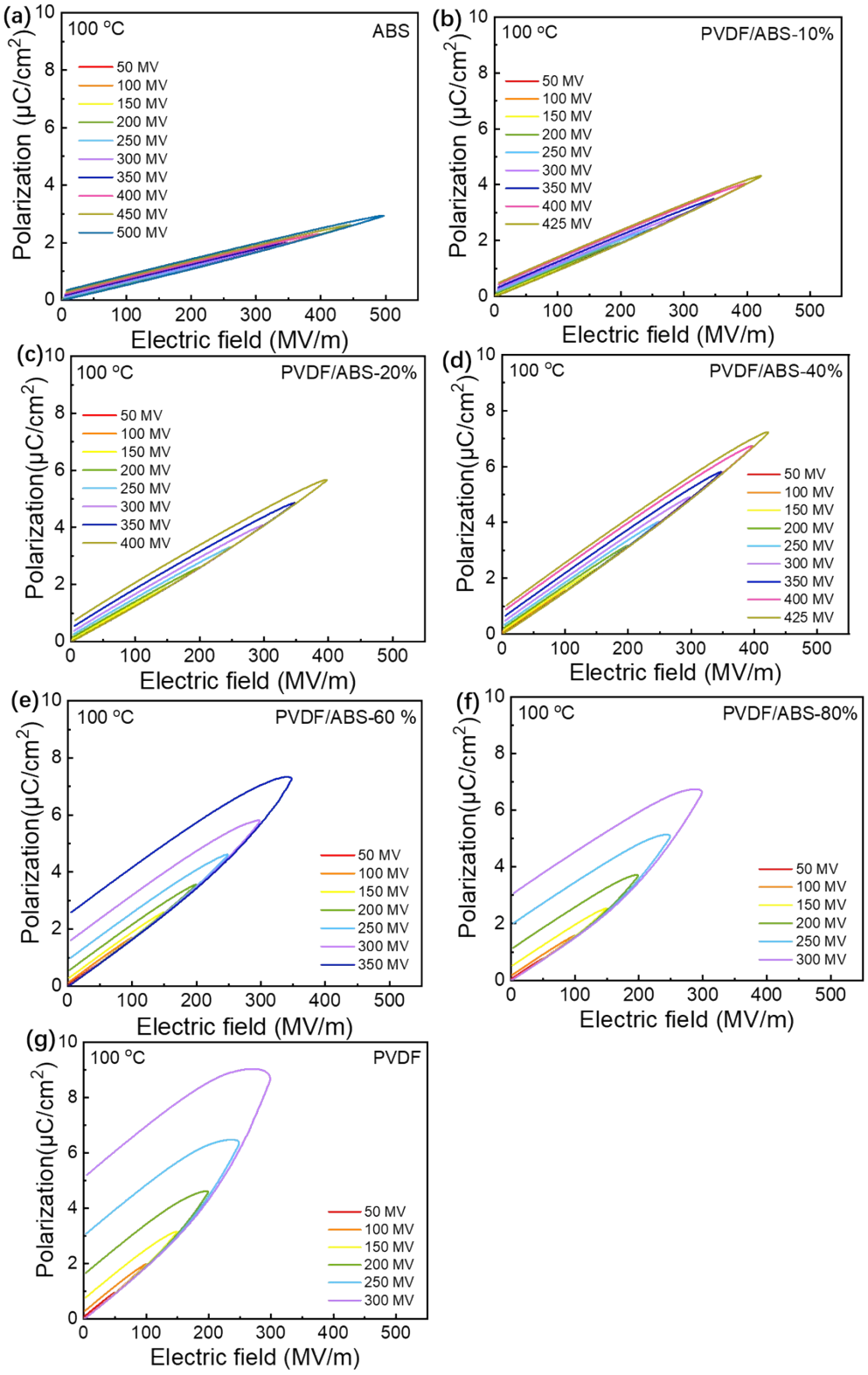

Fig. S6 The *P-E* loops for ABS, PVDF and ABS/PVDF composite films at elevated temperature (100 ℃)

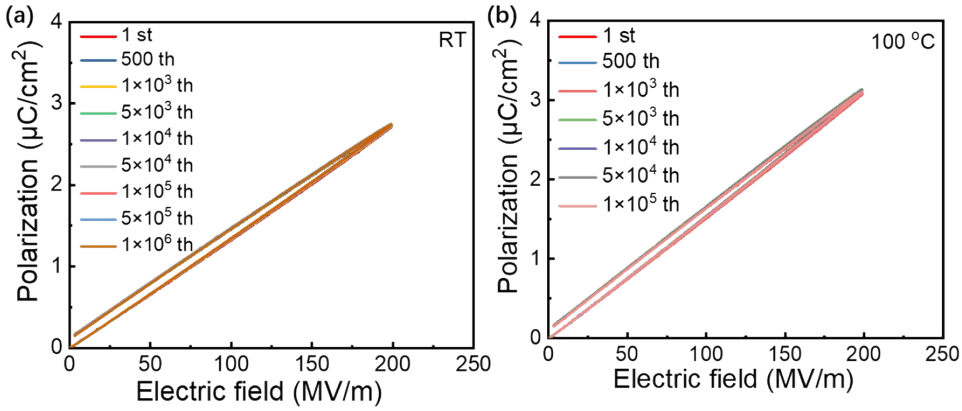

Fig. S7 The *P*-*E* loops with different cycling numbers at room temperature and 100 ℃