Supporting Information

A Blended Binary Composite of Poly(vinylidene fluoride) and Poly(methyl methacrylate) Exhibiting Excellent Energy Storage Performances

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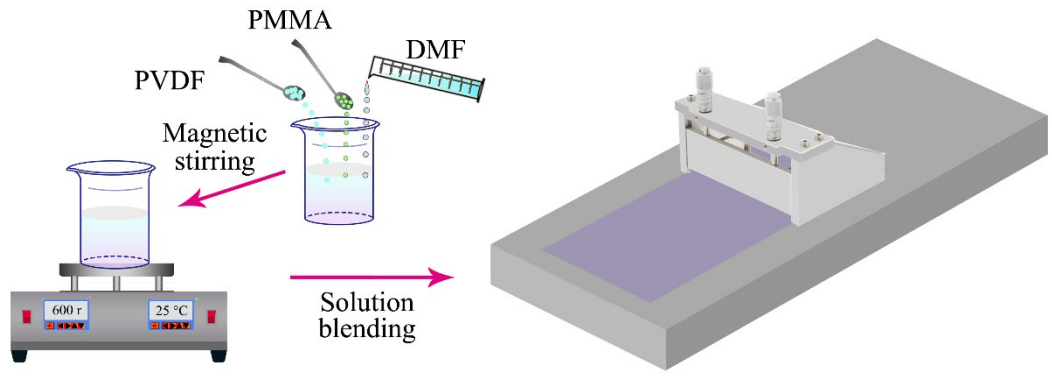

Fig. S1. Preparation process of the blending composite.

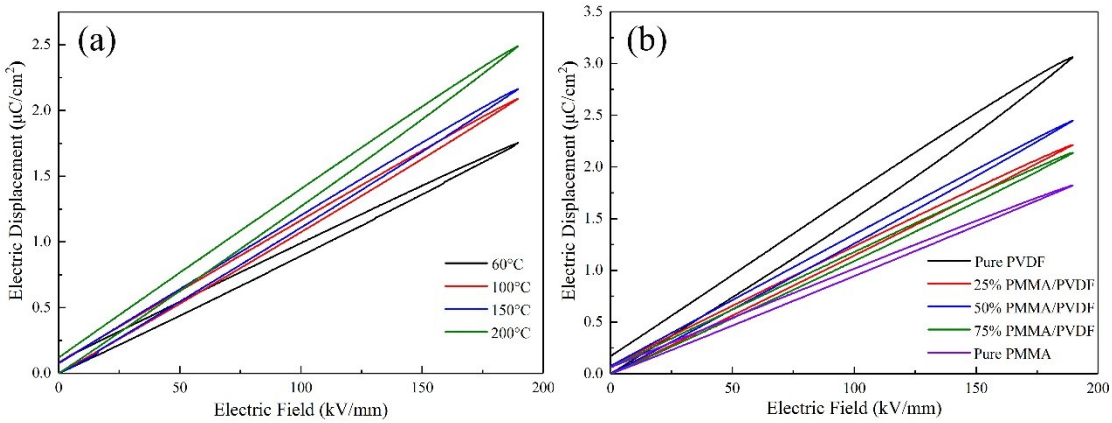

Fig. S2. Ferroelectric properties at 190 kV/mm. (a) 50 vol.% PMMA/PVDF blending composite with different heat treatment temperatures, (b) PMMA/PVDF blending composites with different PMMA volume contents at 150°C heat treatment.

Table S1. Compare the energy storage properties and breakdown strength of representative polymer-based dielectrics.

Composites	**Energy density(J/cm^3)**	**Energy Efficiency (%)**	**Electric field(kV/mm)**	**Fabrication technique**	**Published Year/references**
1wt% Pt@PDA@BT/PVDF-HFP	6.4	52	390	solution-casting	2018 (Ref.1)
poly(MSEMA-co-GMA)	12.5	70	500	drop casting	2017 (Ref.2)
3.6vol% $BaTiO_3$@TiO_2@Al_2O_3-PVDF	14.84	65	450	solution-casting	2018 (Ref.3)

4vol% BT@Al_2O_3 NFs/PVDF	12.37	63	450	spin-coating	2017 (Ref.4)
2.1vol% BCZT@PATP NFs/PVDF	8.23	57.5	380	spin-coating	2017 (Ref.5)
3.6vol% BT@AO-DA NFs/PVDF	10.58	64	420	spin-coating	2017 (Ref.6)
5vol% PVP modified ST NP	5.1	64.6	270	tape casting	2017 (Ref.7)
5wt% mTiO_2@$BaTiO_3$-1NWs/P(VDF-HFP)	9.53	64	440	solution-casting	2017 (Ref.8)
TiO_2@PZT nanowire array/P(VDF-TrFE-CTFE)	6.9	49.5	143	spin-coating	2017 (Ref.9)
5vol% ST-PDA NFs/PVDF	9.12	58	360	solution-casting	2018 (Ref.10)
F4CBT-1/PVDF	9.89	56	375	solution-casting	2018 (Ref.11)
5vol% $BaTiO_3$@PMPCS NWs /P(VDF-HFP)	7.5	55.1	300	slowly dried	2017 (Ref.12)
5wt% $BaTiO_3$@TiO_2 NWs/P(VDF-HFP)	9.95	65	500	solution-casting	2018 (Ref.13)
3vol% NN@PDA NWs/PVDF	12.26	61	410	solution-casting	2018 (Ref.14)
$BaTiO_3$/MWNTs/PVDF(11.5 /0.35/88.15)	10.3	77.2	324	solution casting	2019 (Ref.15)
5.0 vol%$BaTiO_3$@PTFMPCS	14.64	52.5 %	466	–	2018 (Ref.16)
3 vol% Aligned BZCT@SiO_2-PVDF	18.9	53.3%	576	hot-pressing	2018 (Ref.17)
5 wt% BT@BN/PVDF	17.6	53%	580	–	2018 (Ref.18)
TiO_2-P2/PVDF	12.4	50%	550	spin-coating	2018 (Ref.19)
50 vol% PMMA/PVDF	20.1	63.5%	570	solution-casting	This work

Notes and references

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