

**Excellent comprehensive energy storage capabilities achieved in linear polymer
composites via inserting acrylic rubber dielectric elastomers**

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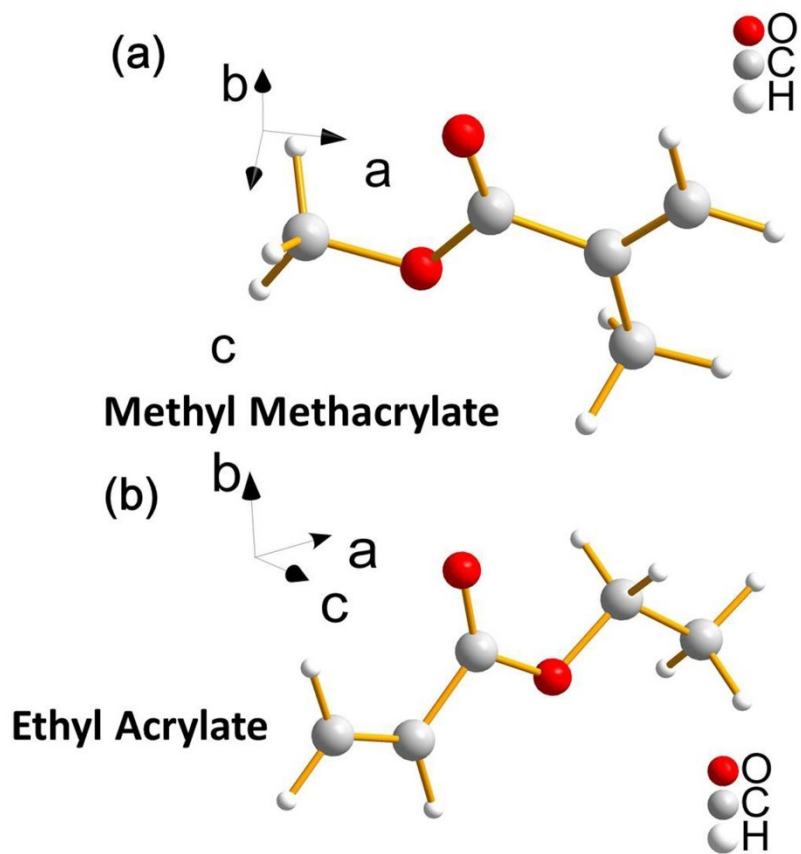


Fig. S1. (a) The structural formula of PMMA ($[\text{CH}_2\text{C}(\text{CH}_3)(\text{CO}_2\text{CH}_3)]_n$, the main monomer: methyl methacrylate) and (b) the structural formula of DE ($\text{CH}_2\text{CHCOOC}_2\text{H}_5$, the main monomer: ethyl acrylate).

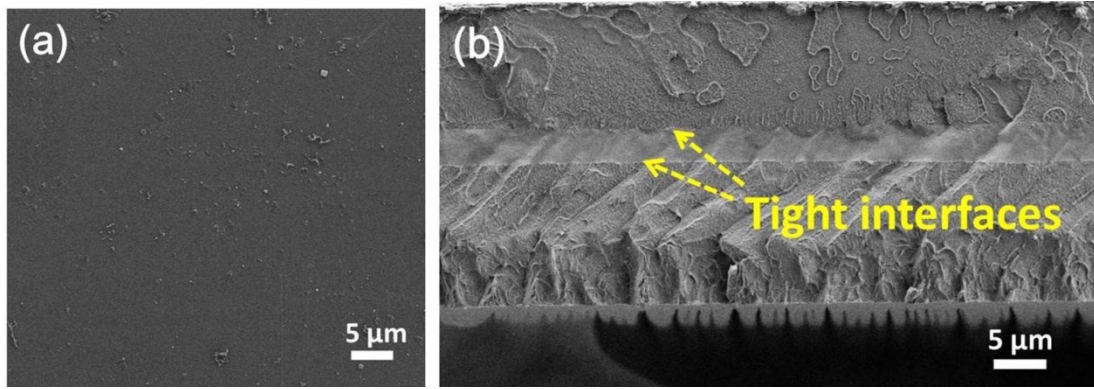


Fig. S2. (a) The in-plane SEM image of PMMA (b) Shows the cross-section view, while arrow displays the two tight interfaces between PMMA and DE of composite.

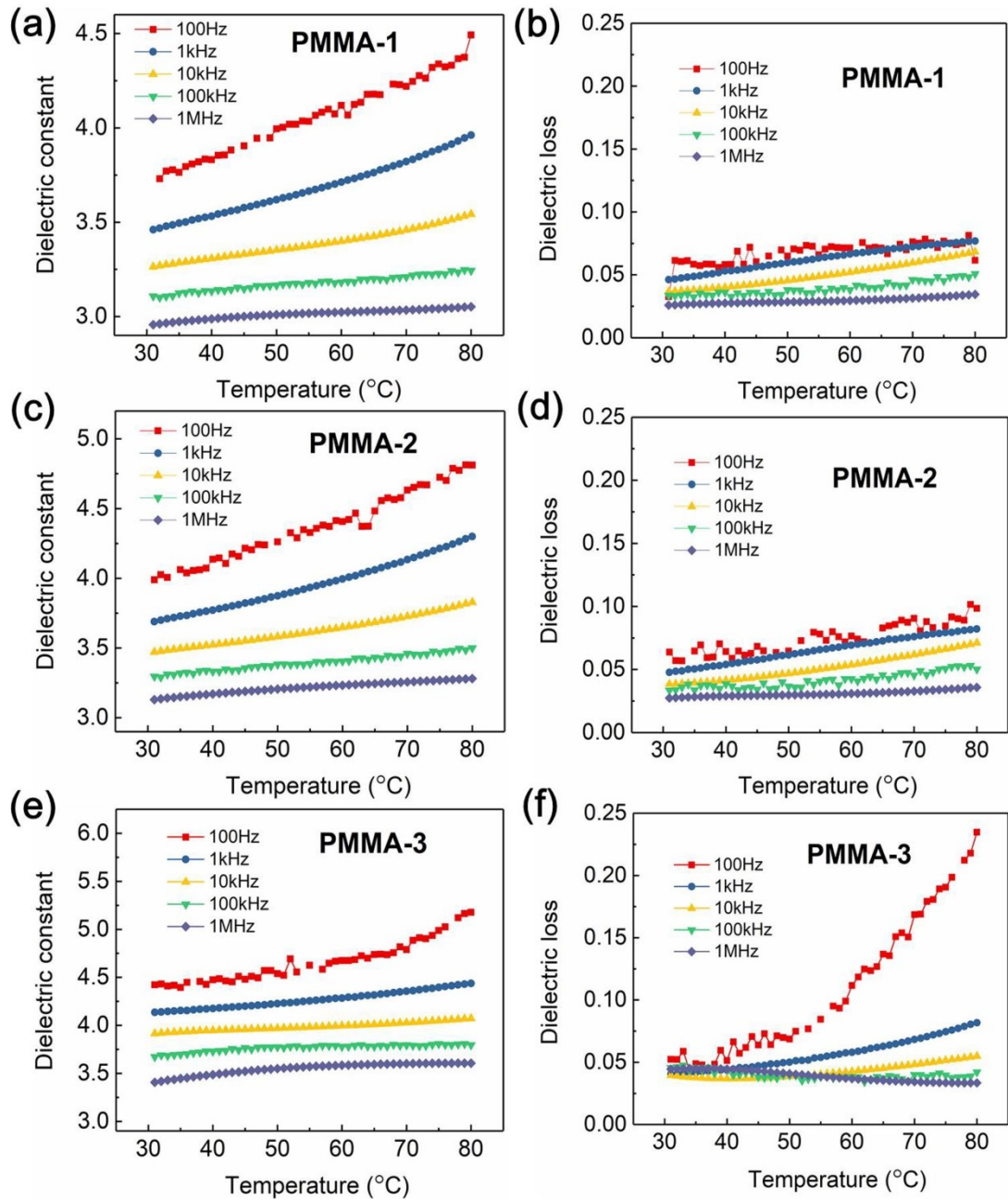


Fig. S3. Temperature spectra of the (a), (c), (e) dielectric constant and (b), (d), (f) dielectric loss of the trilayered all-polymer composites measured at varied frequency.

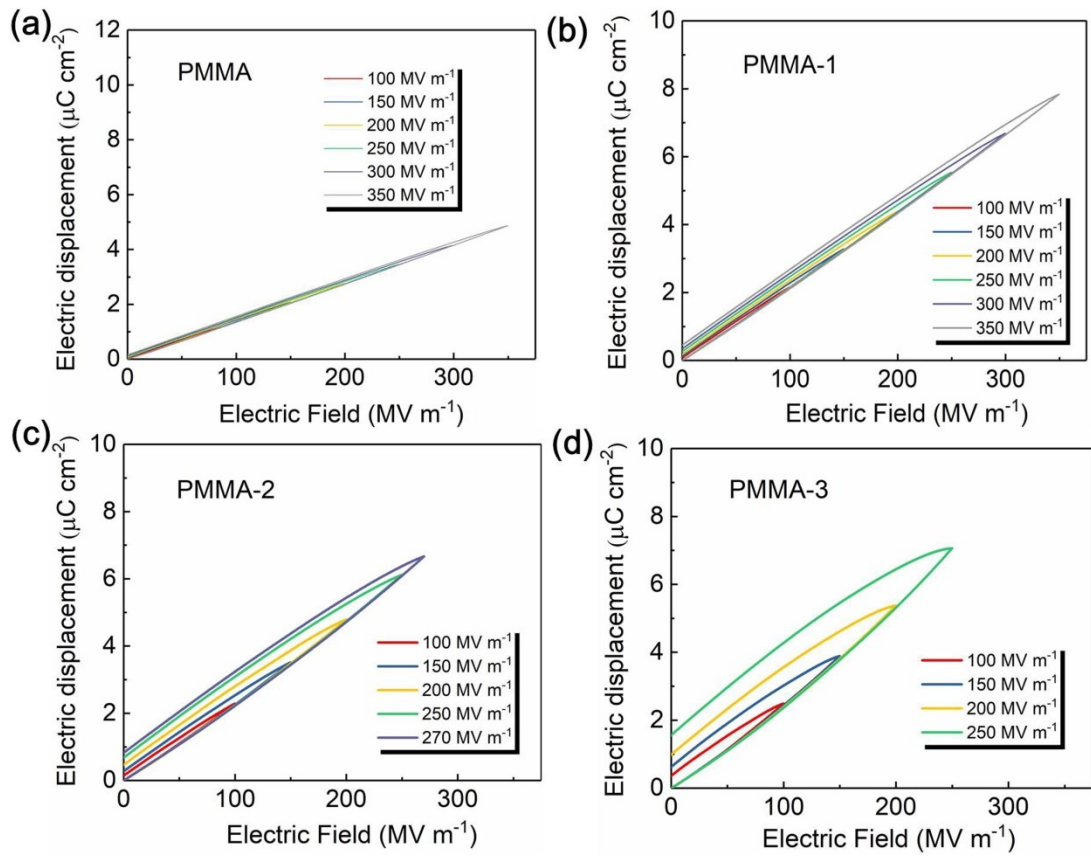


Fig. S4. (a-d) Unipolar electric displacement–electric fields (D – E) loops of the trilayered all-polymer composites.

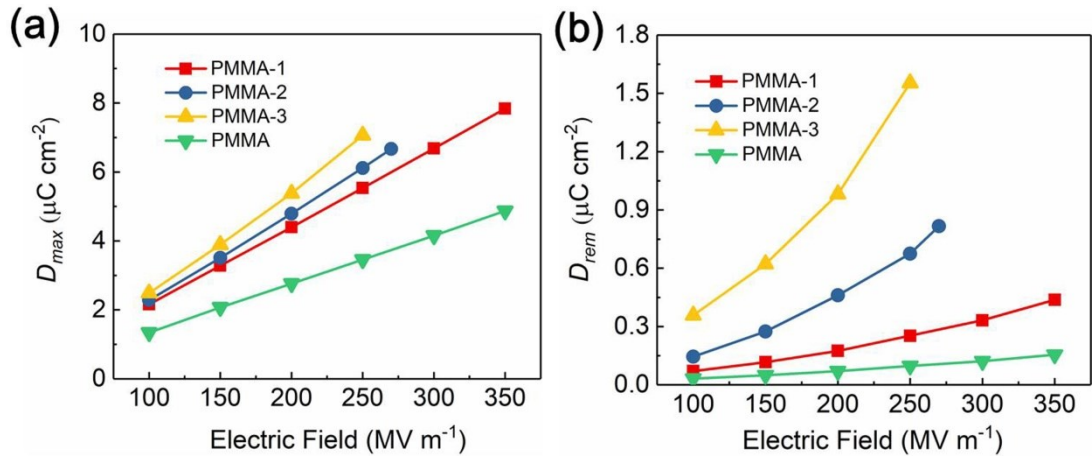


Fig. S5. (a) Maximum displacement and (b) remnant displacement as a function of electric fields of the trilayered all-polymer composites.

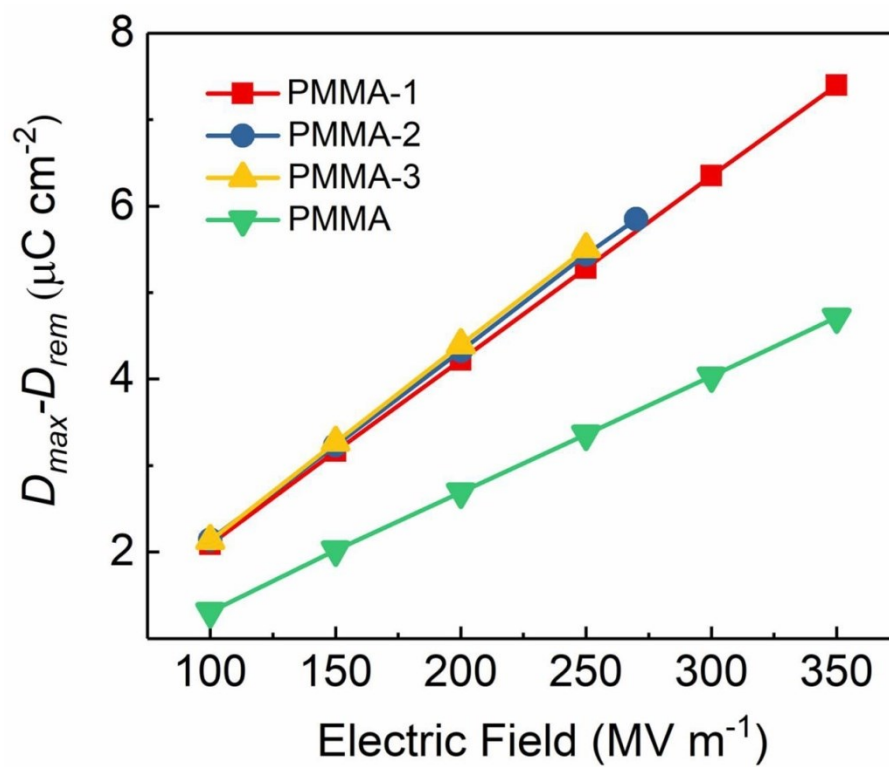


Fig. S6. Electric displacement difference of the trilayered all-polymer composites.

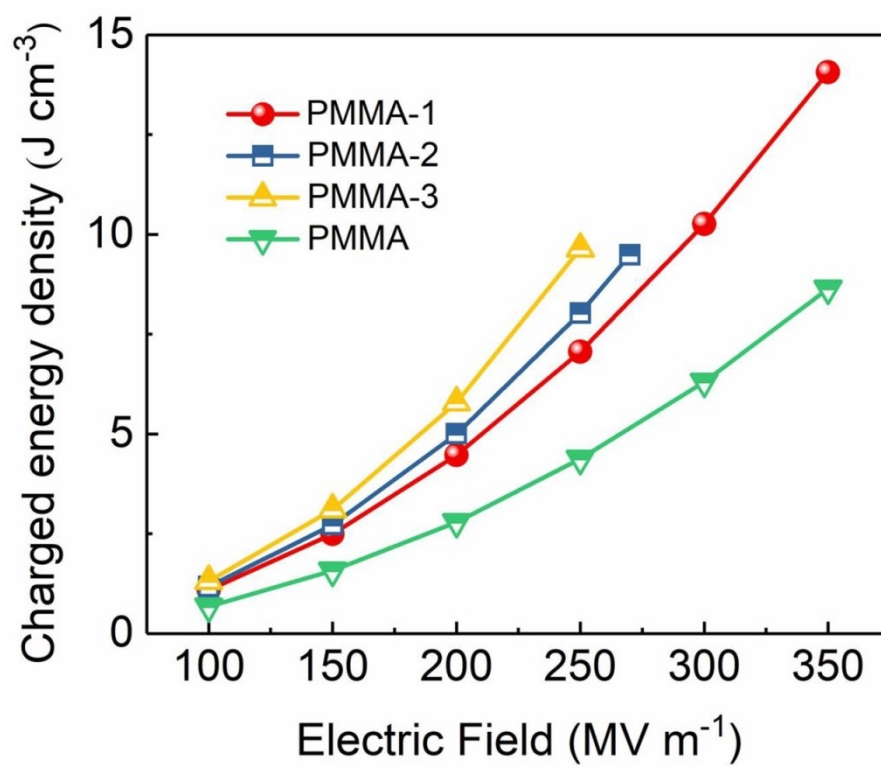


Fig. S7. Charged energy density as a function of electric fields of the trilayered all-polymer composites.