

**Research on the energy storage performance of laminated composite based on
multidimensional co-design in a broad temperature region**

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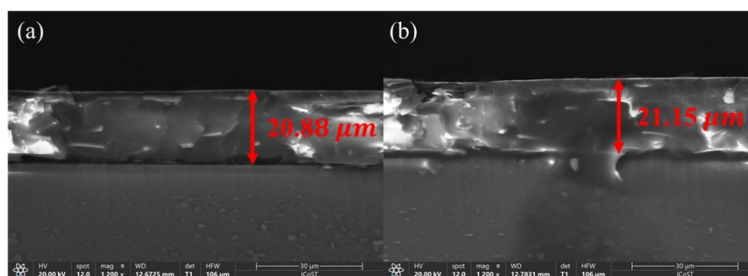


Fig.S1 SEM result of (A-T-A)/PI composite cross section.

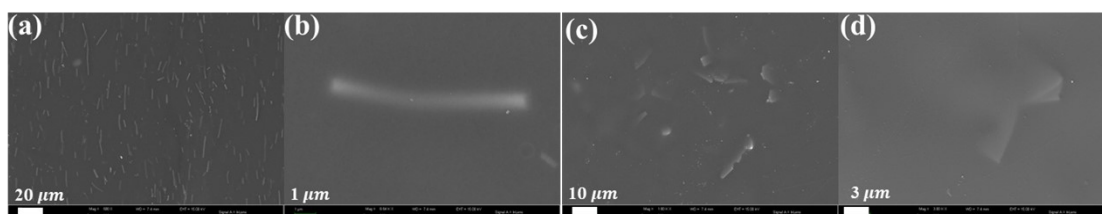


Fig.S2 (a, b) SEM images of the TiO₂/PI composite surface. (c, d) SEM images of the Al₂O₃/PI composite surface.

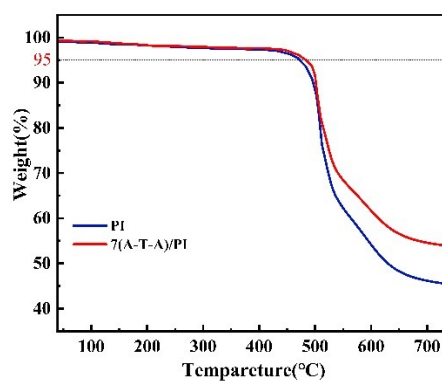


Fig. S3 TGA result of 7(A-T-A)/PI and pure PI.

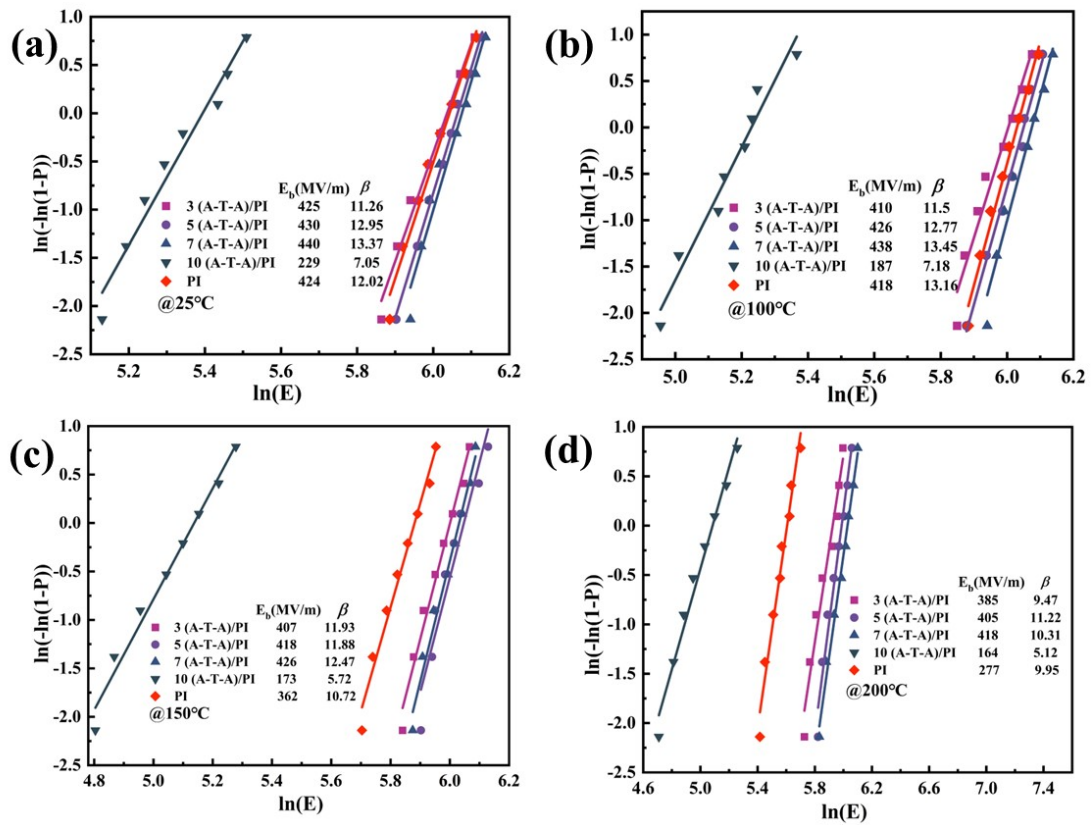


Fig. S4 The E_b and β of the composite films at (a) 25 °C, (b) 100 °C, (c) 150 °C, and (d) 200 °C.

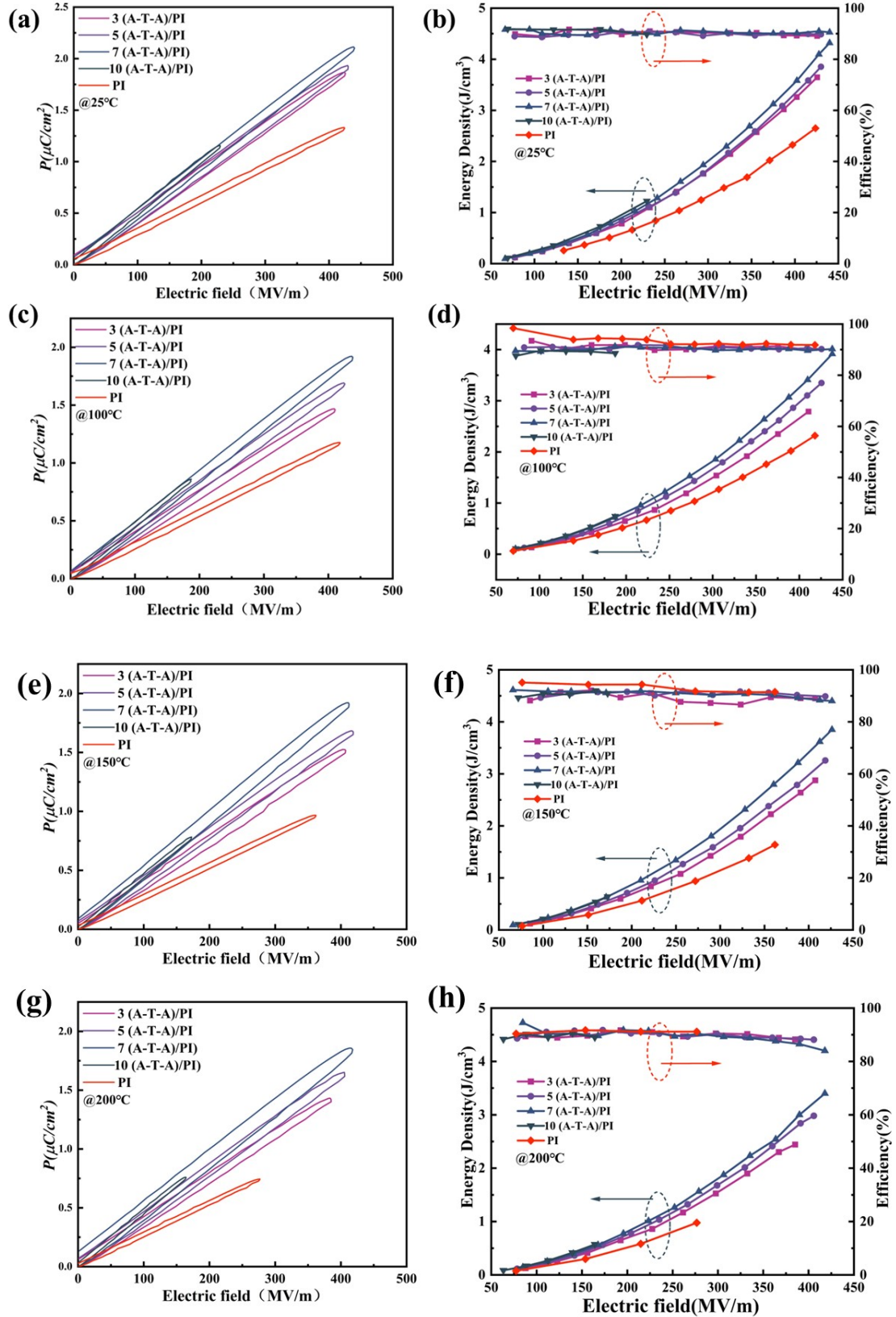


Fig. S5 (a) D–E loops and (b) energy storage performance at 25 °C. (c) D–E loops and (d) energy storage performance at 100 °C. (e) D–E loops and (f) energy storage performance at 150 °C. (g) D–E loops and (h) energy storage performance at 200 °C.