

**Simultaneous Realization of Significantly Enhanced
Breakdown Strength and Moderately Enhanced Permittivity
in Layered PMMA/P(VDF-HFP) Nanocomposites via
Inserting a Al₂O₃/P(VDF-HFP) Layer**

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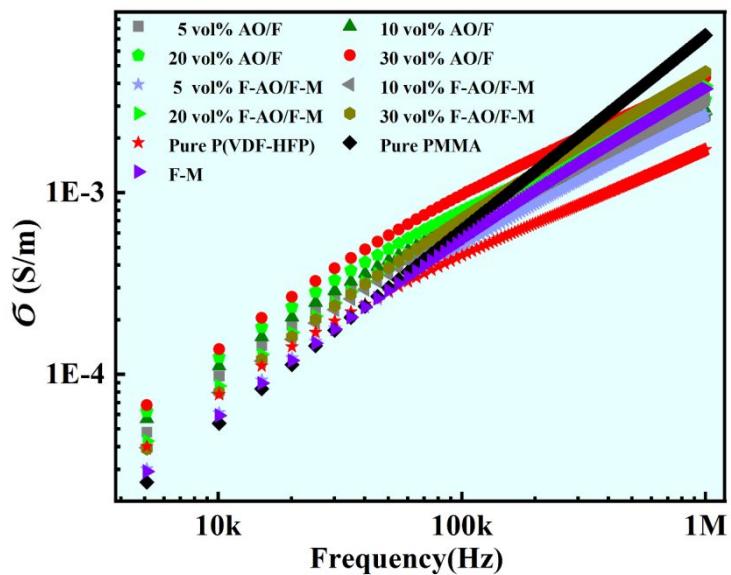


Figure S1. The frequency dependence of conductivity for pure PMMA, pure P(VDF-HFP), AO/F single layer composites, F-M bilayer composite and F-AO/F-M trilayer composites.

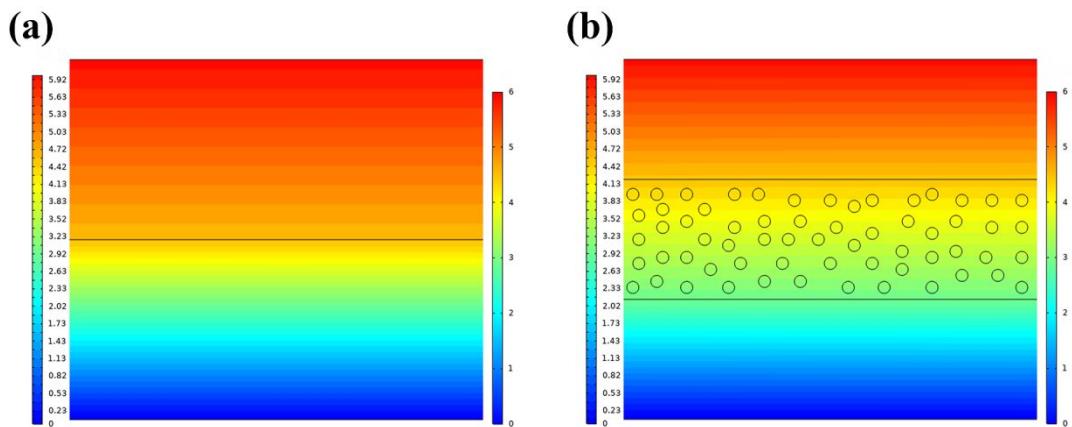


Figure S2. Electric potential in (a) F-M bilayer composite and (b) F-AO/F-M trilayer composites by finite element simulation.

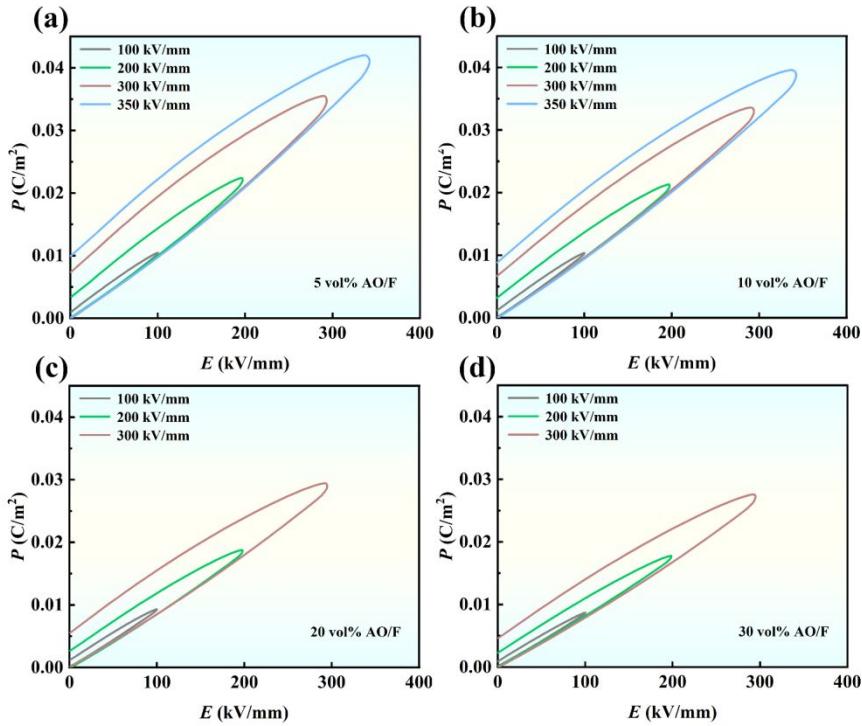


Figure S3. D - E loops of (a) 5 vol% AO/F composite, (b) 10 vol% AO/F composite, (c) 20 vol% AO/F composite and (d) 30 vol% AO/F composite.

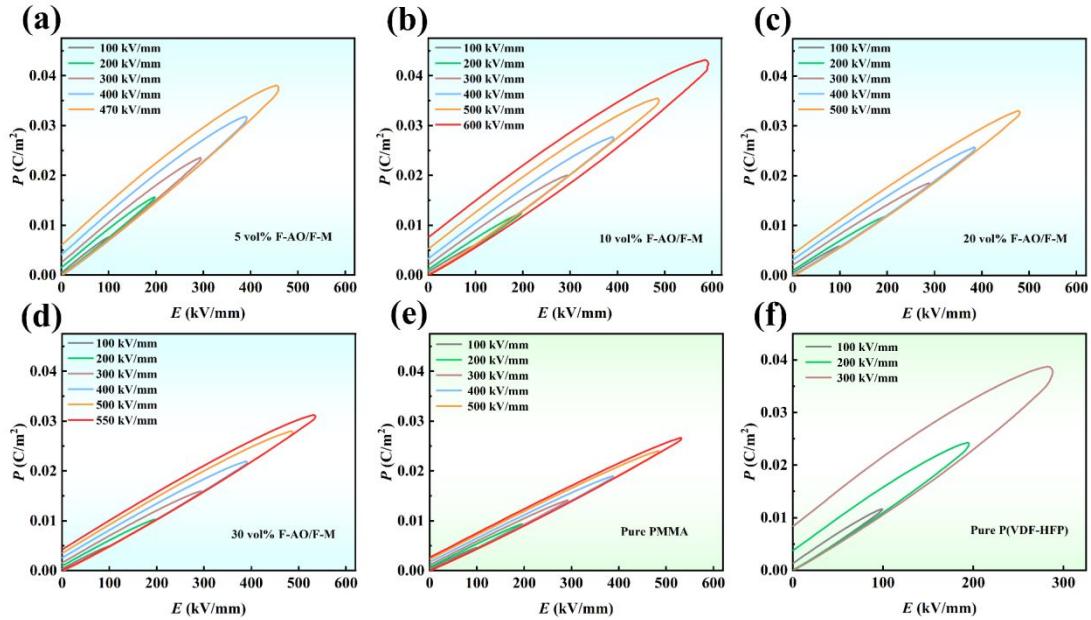


Figure S4. D - E loops of (a) 5 vol% F-AO/F-M composite, (b) 10 vol% F-AO/F-M composite, (c) 20 vol% F-AO/F-M composite, (d) 30 vol% F-AO/F-M composite, (e) pure PMMA and (f) pure P(VDF-HFP).

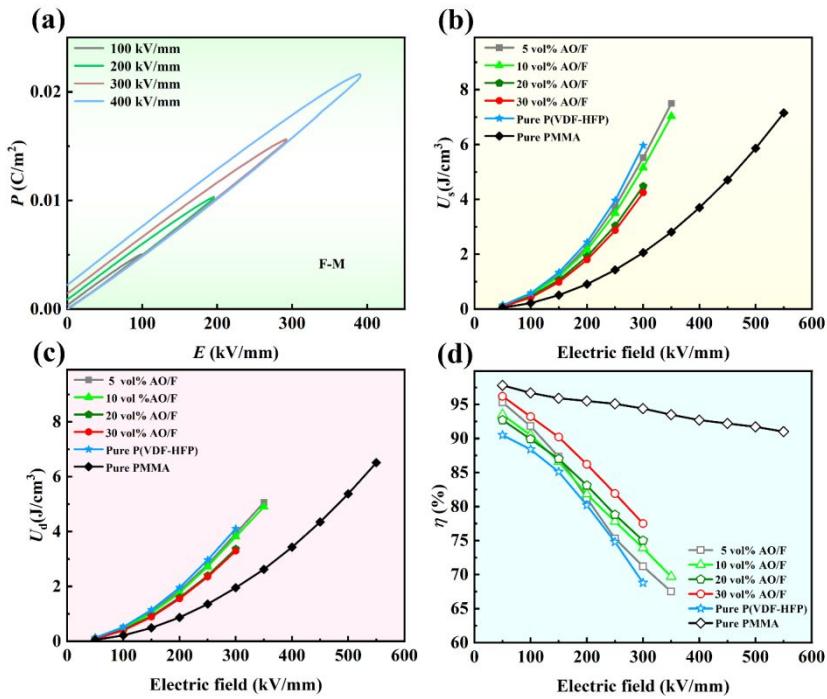


Figure S5. D - E loops of (a) F-M bilayer composite. (b) The stored energy density U_s , (c) discharge energy density U_d and (d) efficiency η of AO/F single layer composites.