

PPDA Hybrid: A Flexible and Biocompatible Platform for Supercapacitor and Strain Sensing Applications

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Table S1. Contents of PPD series aerogels

Sample	LCA (mM)	Py (mM)	DDT/ γ -CD (mM)
PPy	30	432	0
PPD ₁	30	432	5
PPD ₂	30	432	10
PPD ₃	30	432	15
PPD ₄	30	432	20

Table S2. Contents of PDDA series hybrids

Sample	LCA (mM)	Py (mM)	DDT/ γ -CD (mM)	AM wt. %	BIS wt. %	AAPH wt. %
PA	30	432	0	10	0.1	1
PPD ₁ A	30	432	5	10	0.1	1
PPD ₂ A	30	432	10	10	0.1	1
PPD ₃ A	30	432	15	10	0.1	1

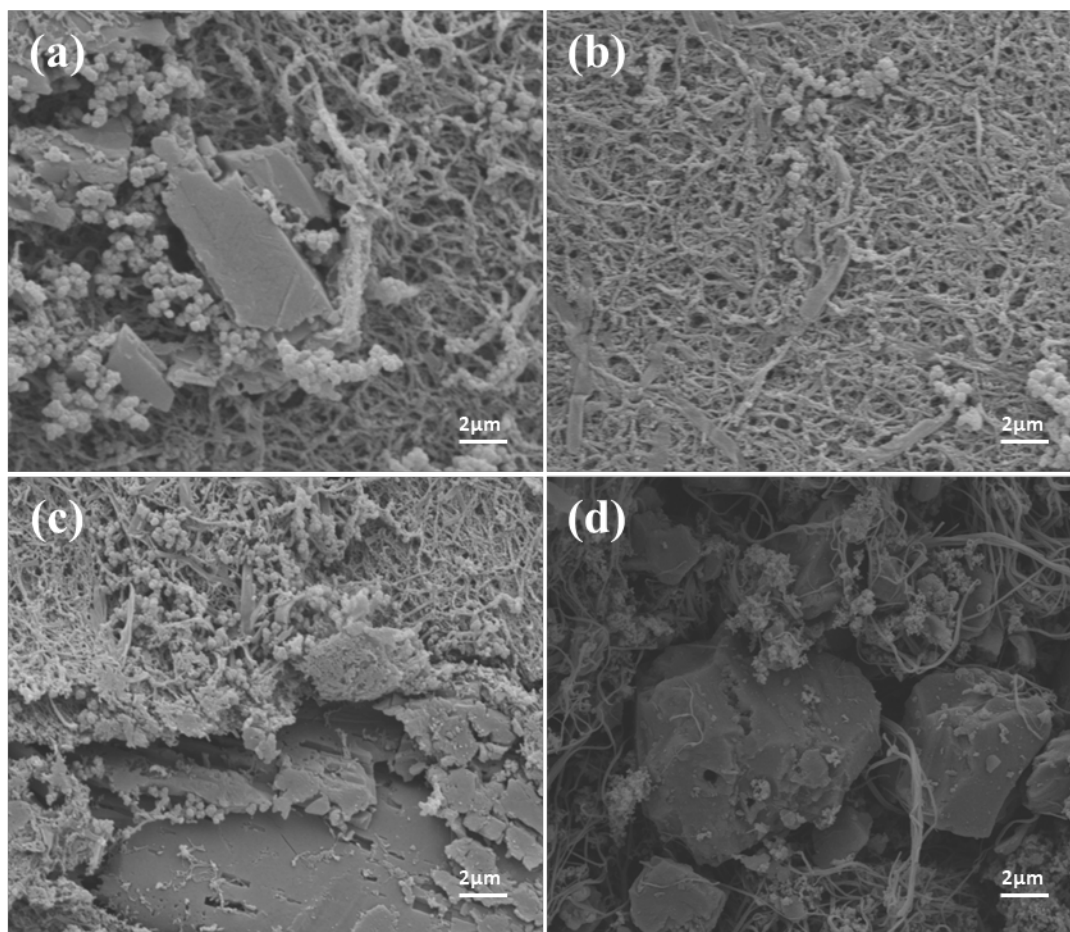


Fig. S1 SEM images of (a) PPD₁, (b) PPD₂, (c) PPD₃, and (d) PPD₄ aerogels.

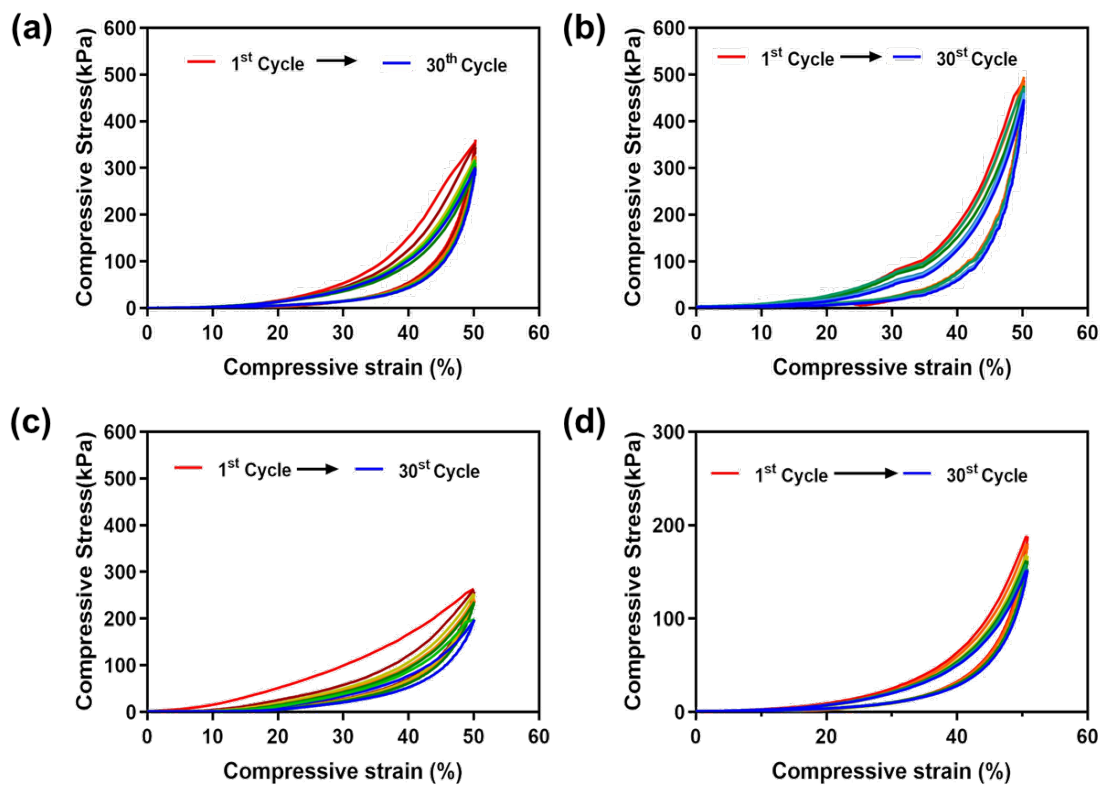


Fig. S2 Cyclic compress stress-strain curves at 50% strain of for (a) PA, (b) PPD₁A, (c) PPD₃A, (d) PPD₄A hybrid.

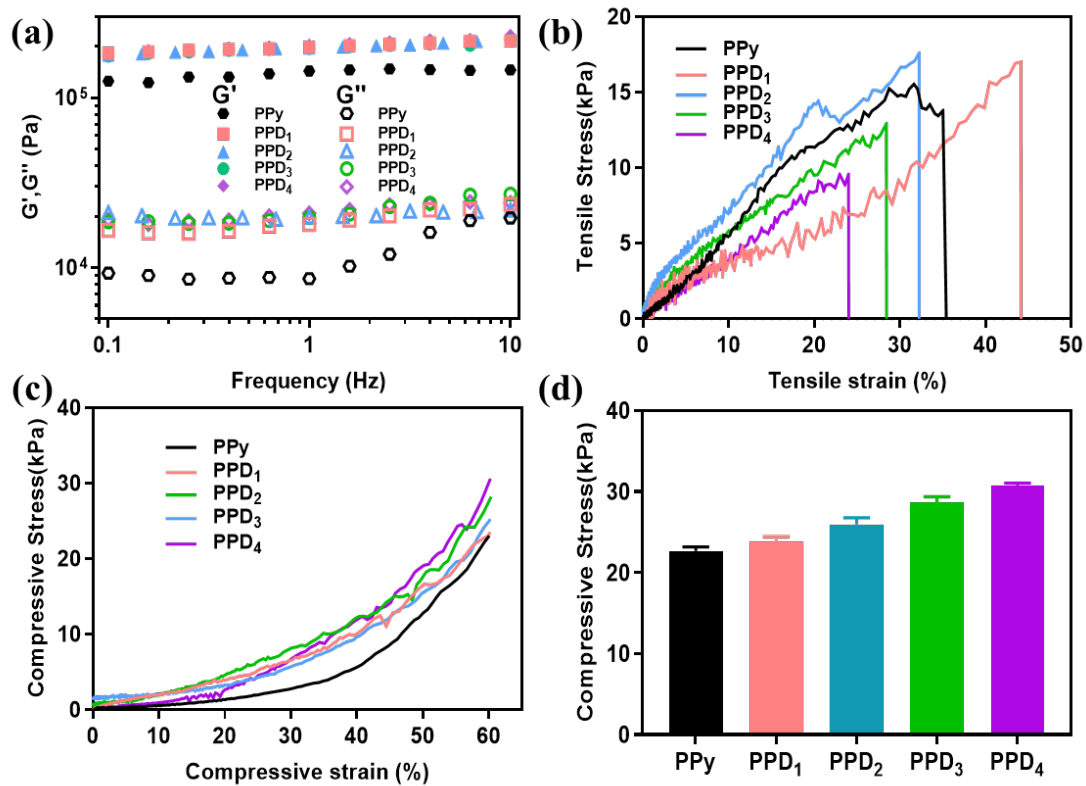


Fig. S3 (a) Frequency sweep, (b) tensile stress-strain curves, (c) compressive stress-strain curves and (d) compressive stress of PPY aerogel and PPD series aerogels.

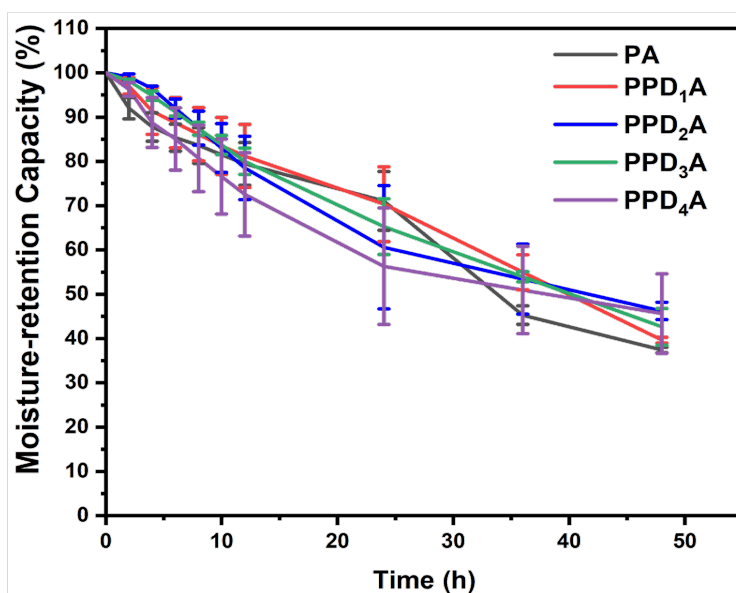


Fig. S4 Moisture retention capacity of PA and PPD series hybrids.

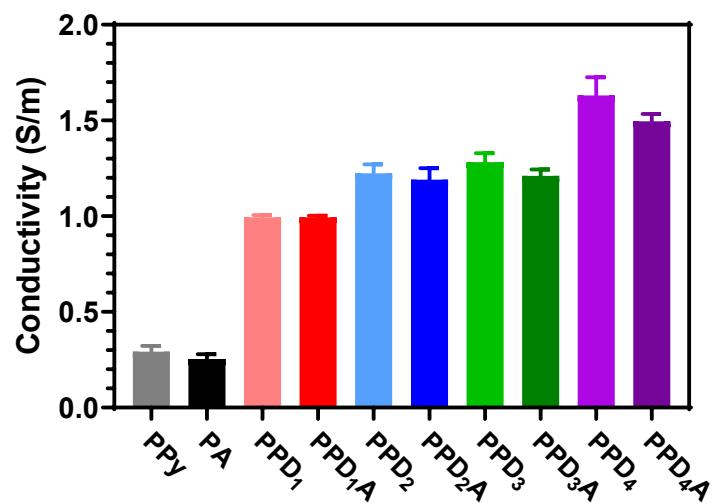


Fig. S5 Conductivity of PPy aerogel, PPD series aerogels, PA hybrid and PPDA series hybrids.

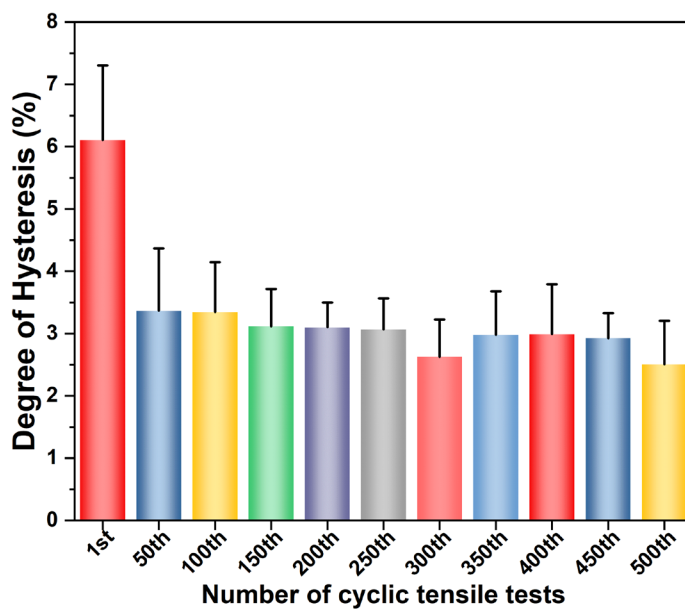


Fig. S6 Degree of Hysteresis of PPD₂A hybrid of cyclic tensile stress-strain tests at 50% strain at various cycles.