

Support information

One-step electrospinning PMMA-SPO with hierarchical architectures as multi-functional transparent screen window

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KEYWORDS: PMMA; SPO; electrospinning; screen window; transparent.

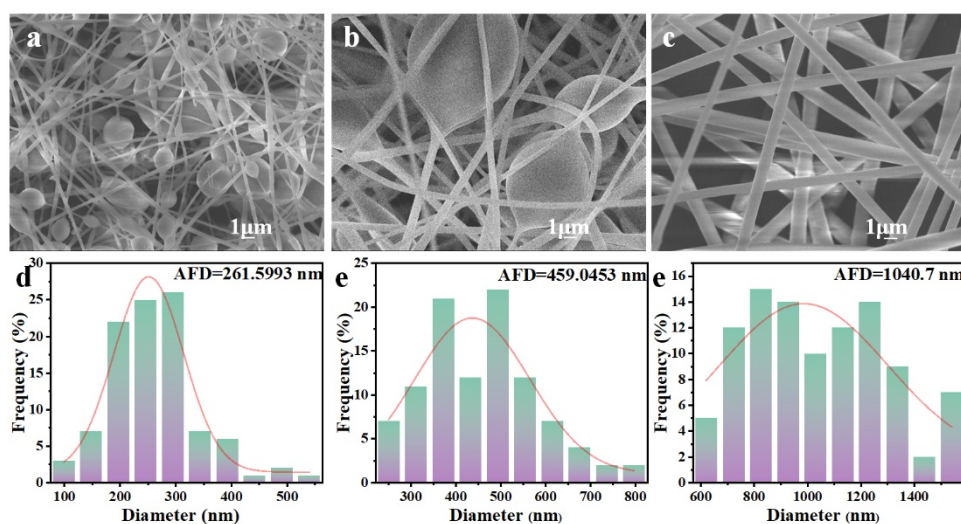


Fig.S1 SEM images and diameter distributions of PMMA-SPO nanofibers sprayed on screen window in 10 min process time with concentration of 28% (a), (d), 32% (b), (e) and 38% (c), (f), respectively.

Table S1 Color coordinates of PMMA-SPO membranes with different contents of PMMA and after 0s, 10s, 30s, 60s, 100s UV irradiation.

concentration		0s	10s	30s	60s	100s
28% PMMA	L*	87.83	92.01	83.92	84.21	78.14
	a*	8.72	8.98	8.21	8.72	7.72
	b*	19.09	19.27	17.84	17.69	14.97
32% PMMA	L*	38.22	35.12	40.13	30.75	42.91
	a*	3.70	4.91	4.50	5.20	5.36
	b*	-3.13	-4.67	-2.26	-4.78	-5.62
38% PMMA	L*	37.16	31.22	33.94	29.71	51.06
	a*	0.50	4.55	5.73	5.59	3.28
	b*	-1.72	-8.68	-9.92	-9.92	-8.16

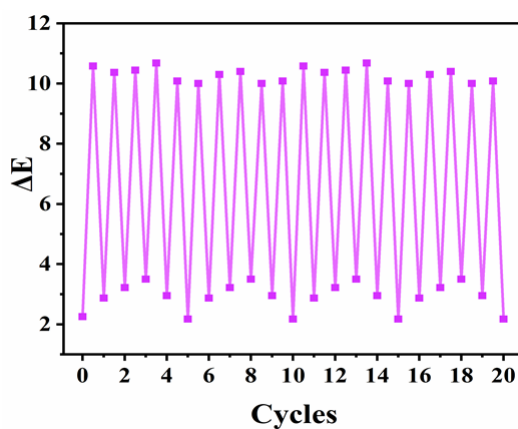


Fig.S2 The reversibility property (samples were irradiated with 365 nm UV light for 100 s followed by removing light for 5 min).

Table S2 Solution properties of the electrospinning precursors of different PMMA concentration.

Sample	Conductivity ($\mu\text{s}\cdot\text{cm}^{-1}$)	Viscosity ($\text{mpa}\cdot\text{s}^{-1}$)	Surface Tension ($\text{mN}\cdot\text{m}^{-1}$)
28% PMMA	275.7	1243.3	84.43
32% PMMA	314.5	1646.8	84.58
32% PMMA	377.1	2014.4	85.37

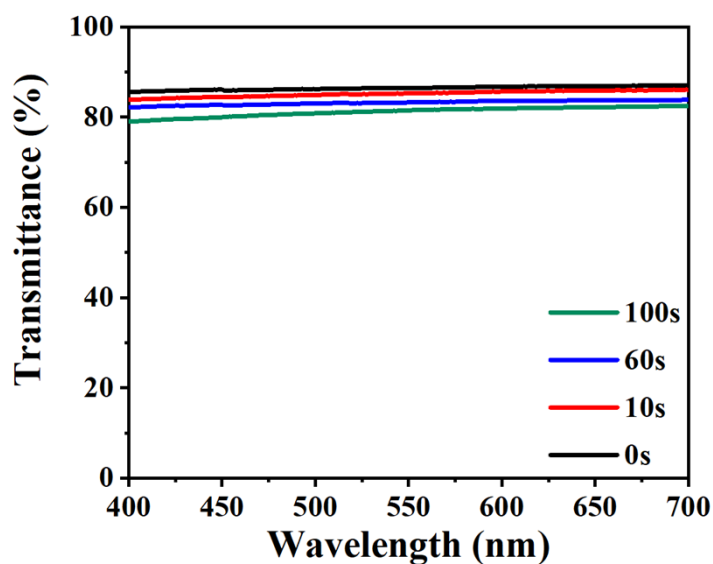


Fig.S3 The light transmittance of the screen window after ultraviolet radiation with 0s, 10s, 60s and 100s, respectively.

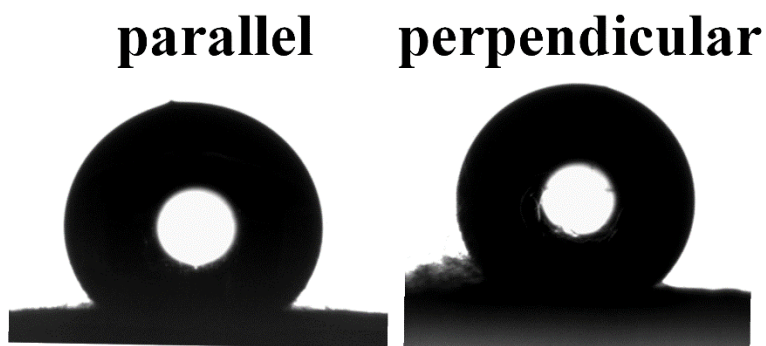


Fig.S4 The advancing water contact angles of the parallel and perpendicular to the fiber

arrangement.