Supporting Information

## Preparation and electroactive phase adjustment of Ag-doped poly (vinylidene fluoride) (PVDF) films

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**Figure S1.** FT-IR spectra for Ag<sup>+</sup>/AgNP/PVDF composite film according to the amount of hydrazine.

	Before washing		After washing	
	Melting Enthalpy (J/g)	Crystallinity (%)	Melting Enthalpy (J/g)	Crystallinity (%)
0	43.63	41.67	43.63	41.67
0.06	43.84	41.87	44.25	42.26
0.22	44.95	42.93	44.50	42.50
0.96	44.82	42.81	44.64	42.64
3.4	44.05	42.07	44.17	42.19
5.1	45.37	43.33	44.72	42.71

**Table S1.** The melting enthalpy  $(^{\Delta H}_f)$  and total crystallinity  $(^{X_c})$  of PVDF films with 0.06, 0.22, 0.96, 3.40, and 5.10 wt.% AgNO<sub>3</sub>, as measured before and after washing process.



**Figure S2.** XRD patterns and their curve deconvolution of (a)(b) PVDF-Ag 3.40 wt.% before washing process, (c)(d) PVDF-Ag 3.40 wt.% after washing process. The dotted points are experimental data, and the solid lines correspond to the best curve fit. the peaks marked with \* correspond to Ag nanoparticles.