Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.

Supporting information

Preparation of WO_3 based flexible electrochromic fabric and near infrared shielding application

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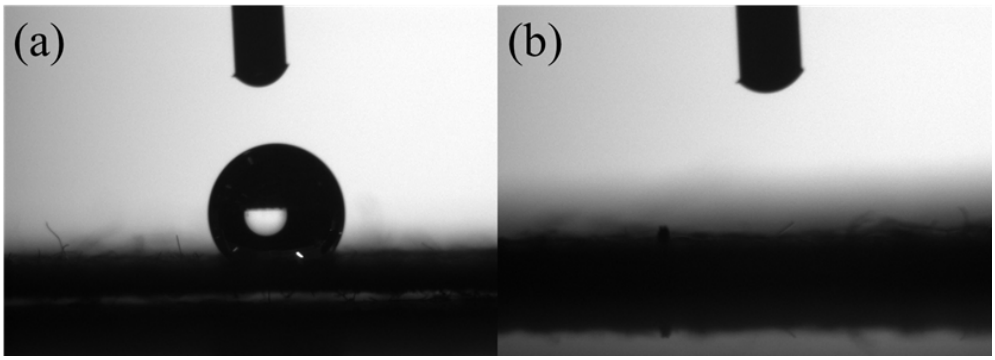

Fig. S1. Contact angle measurements of carbon cloth a) before treatment, b) after treatment.

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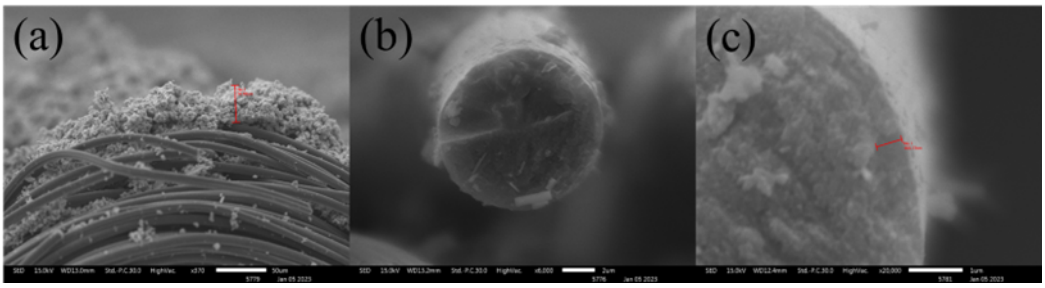

Fig. S2. SEM of WO_3-1.0, (a) cross-section of WO_3-1.0, (b) cross section of a single carbon fiber and WO_3 film, c) enlarged SEM of b.

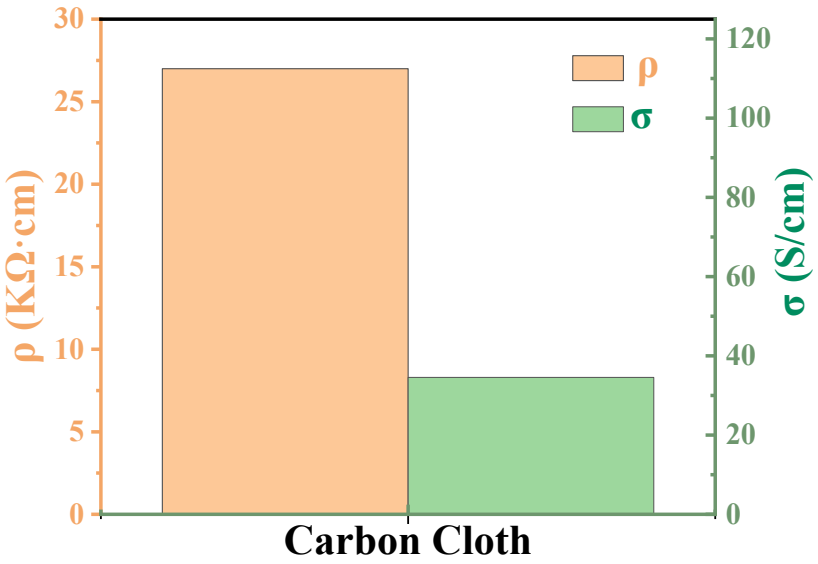

Fig. S3. Histogram of resistivity and conductivity of carbon cloth substrate.

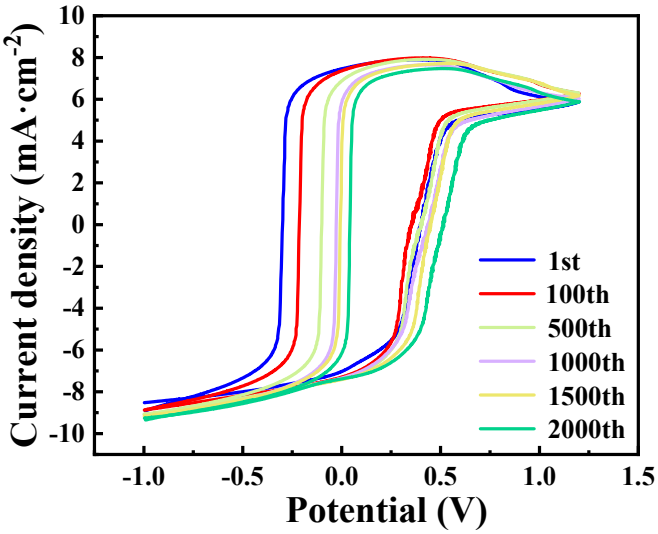

Fig. S4. CV curves of WO_3-1.6 sample after 2000 cycles at -1.0 V~+1.2 V with scanning rate of 50 mV/s.

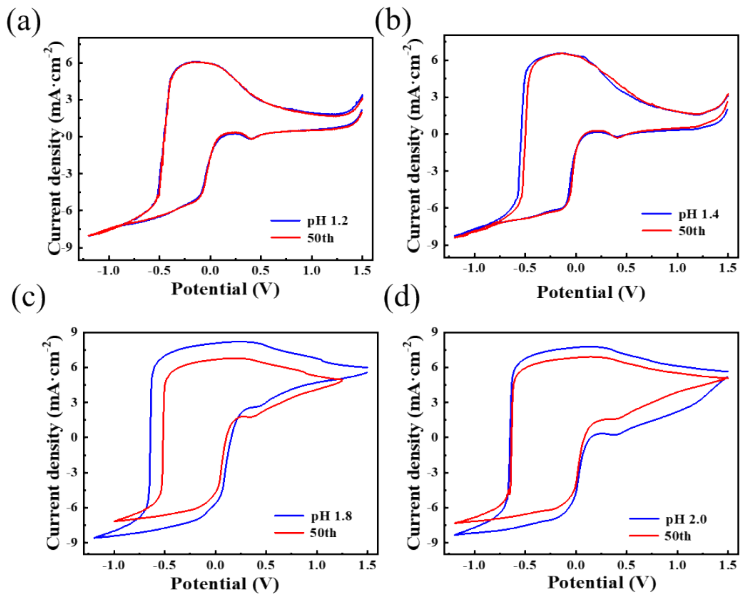

Fig. S5. Cyclic voltammetry curve at a scanning rate of 50 mV/s in the range of -1.2 V~+1.5 V and its voltammetry curve after 50 cycles. (a) WO_3-1.2, (b) WO_3-1.4, (c) WO_3-1.8, and (d) WO_3-2.0 fabrics.

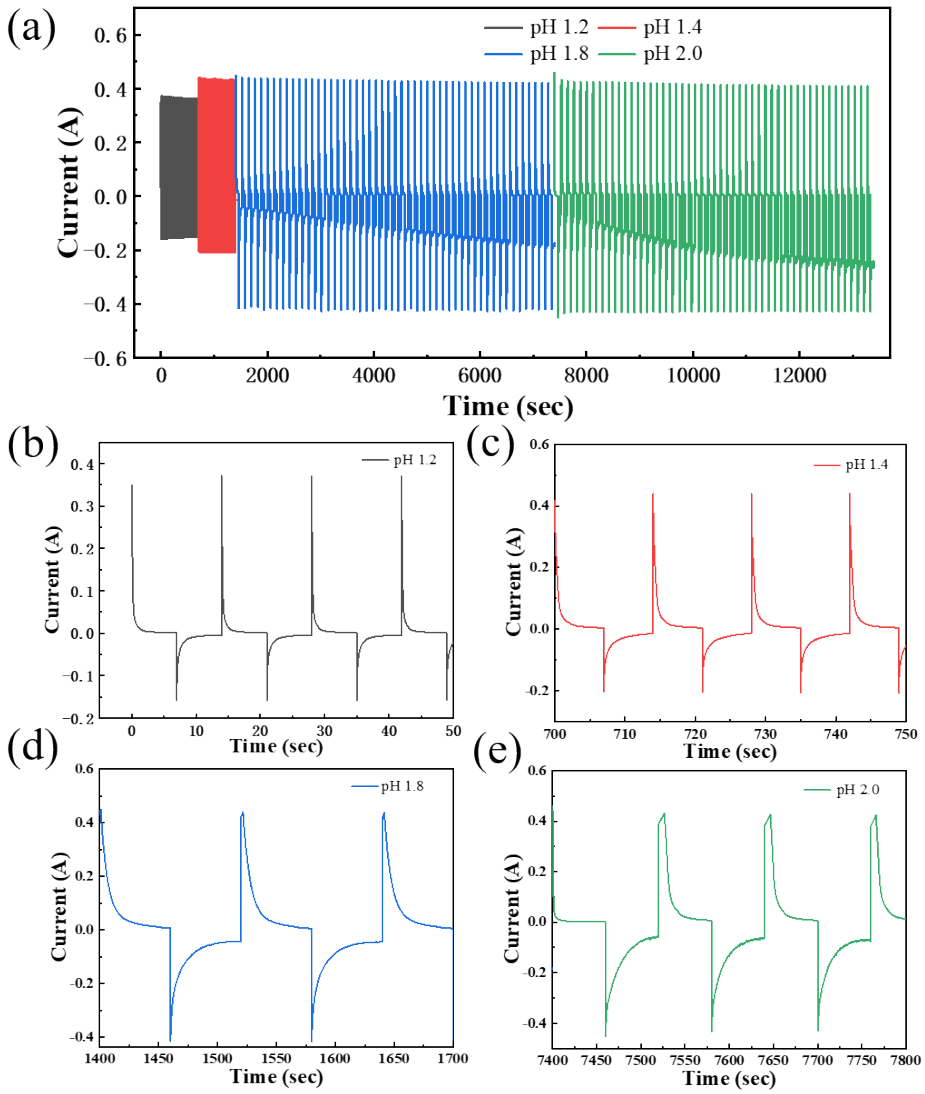

Fig. S6. Chronoamperometry curve for 100 cycles of (a) WO_3-1.2, b) WO_3-1.4, c) WO_3-1.8, and d) WO_3-2.0 fabrics.

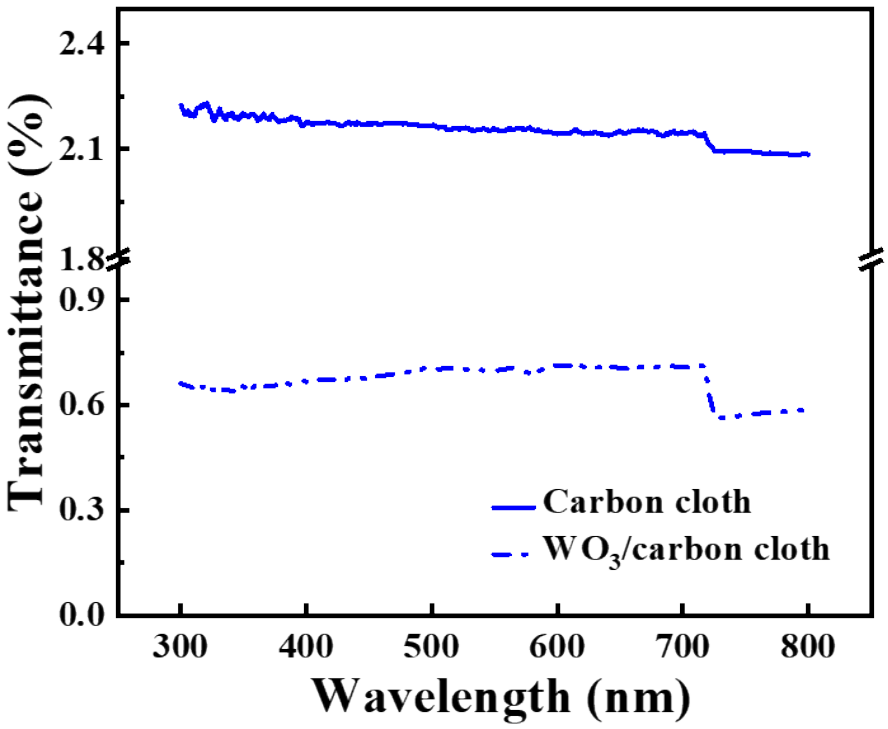

Fig. S7. Transmittance measurement of pure carbon cloth and WO_3/carbon cloth between 300 and 800 nm.

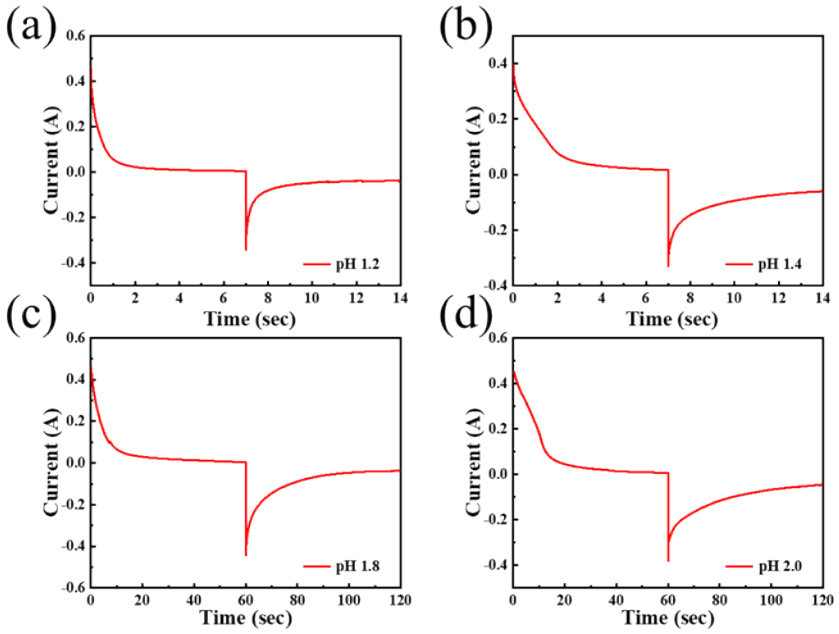

Fig. S8. Switching time characteristics between the colored and bleached states. (a)WO_3-1.2, b) WO_3-1.4, c) WO_3-1.8, and d) WO_3-2.0 fabrics.

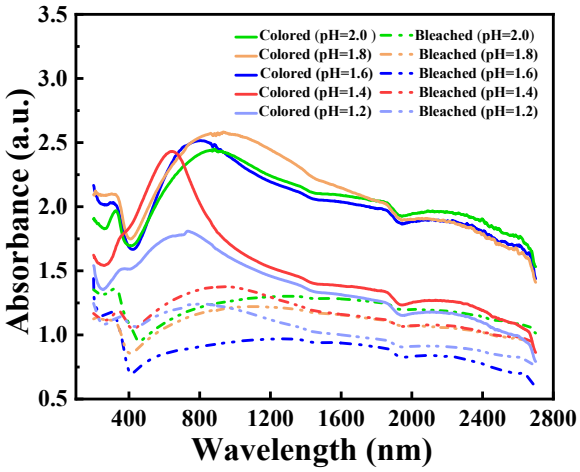

Fig. S9. Absorbance spectra of different samples in the 200~2700 nm wavelength