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Supporting information

Water processable Prussian blue-polyaniline: polystyrene sulfonate nanocomposite (PB-PANI:PSS) for multi-color electrochromic applications

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SI.1 XRD spectra



[Fig. S1]

Fig. S1 XRD spectra of pure PB and PB-PANI:PSS nanocomposite.

SI.2 Calculation of the HOMO&LUMO level and band gap

We used the following equation as well as the onset potential of the CV diagram to calculate HOMO level:

$$E_{HOMO} = [(E_{ox} - E_{1/2(ferrocene)}) + 4.8] eV$$

The Ag/AgCl reference is -0.44 mV with reference to SCE, and Fc/Fc⁺ reference electrode is about +400 mV with reference to SCE in organic electrolyte (*Chem. Rev.* 1996, **96**, 877). The potential value was adjusted by -444 mV vs. Fc/Fc⁺. According to the above information, the HOMO/LUMO and band gap values are calculated and listed below:

Materials	PANI:PSS	PB-PANI:PSS
HOMO (eV)	4.55	4.50
LUMO (eV)	2.03	2.19
Band gap (eV)	2.52	2.31