



Supplementary Materials

Pivotal Role of the Granularity Uniformity of the WO₃ Film Electrode upon the Cyclic Stability during Cation Insertion/Extraction

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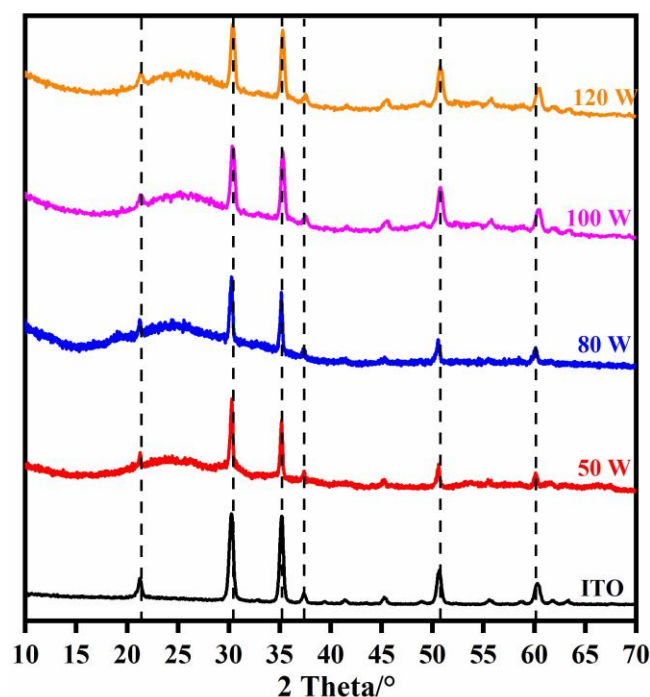


Figure S1. XRD spectra of the prepared WO₃ films.

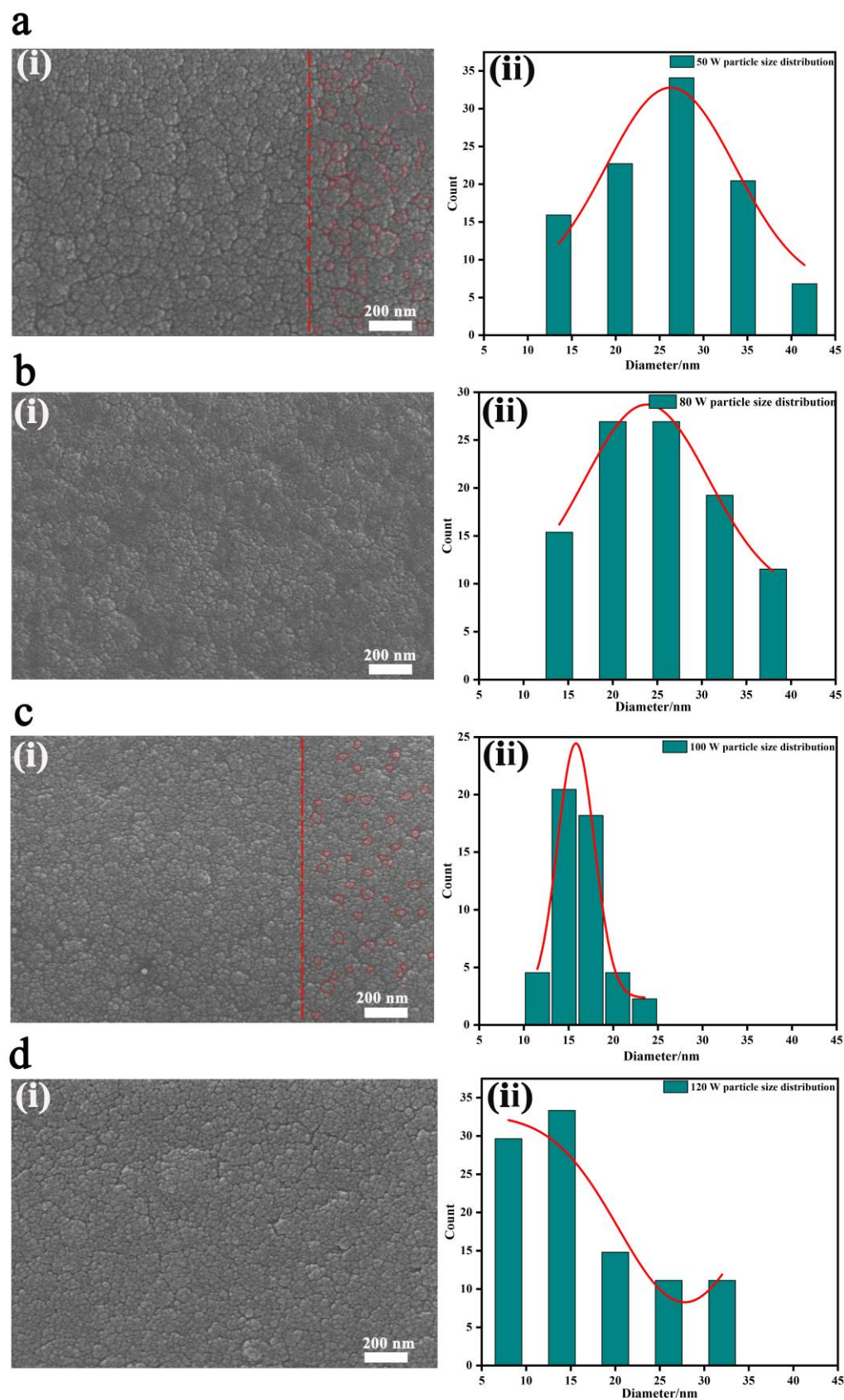


Figure S2. SEM images of the prepared WO₃ films (i) and corresponding particle size distribution analysis through Nano Measure software (ii), **a** 50 W; **b** 80 W; **c** 100 W; **d** 120 W, where red-line circles in **a** and **c** pictured the particle size distribution.

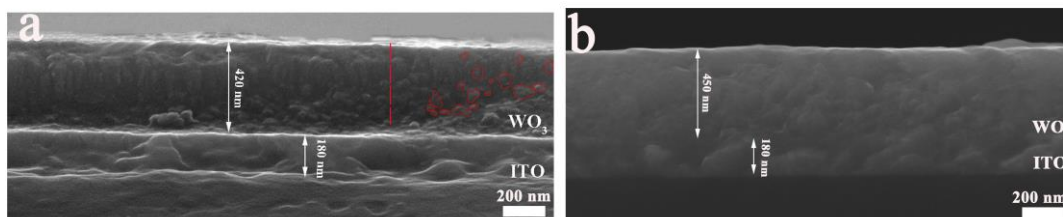


Figure S3. Cross-sectional SEM images of the as-prepared WO₃ films, **a** 50 W; **b** 100 W, where red-line circles in **a** pictured the particle size distribution.

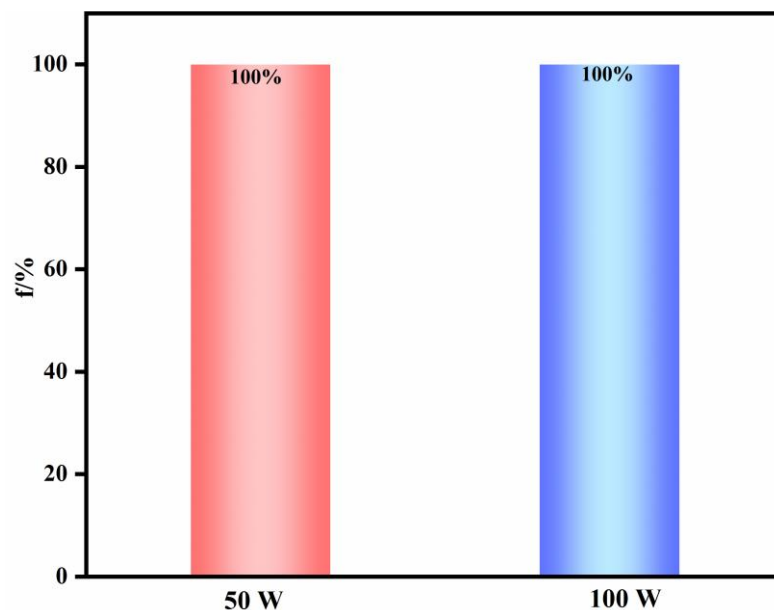


Figure S4. Adhesive force analysis of the as-prepared WO₃ films with ITO substrates.

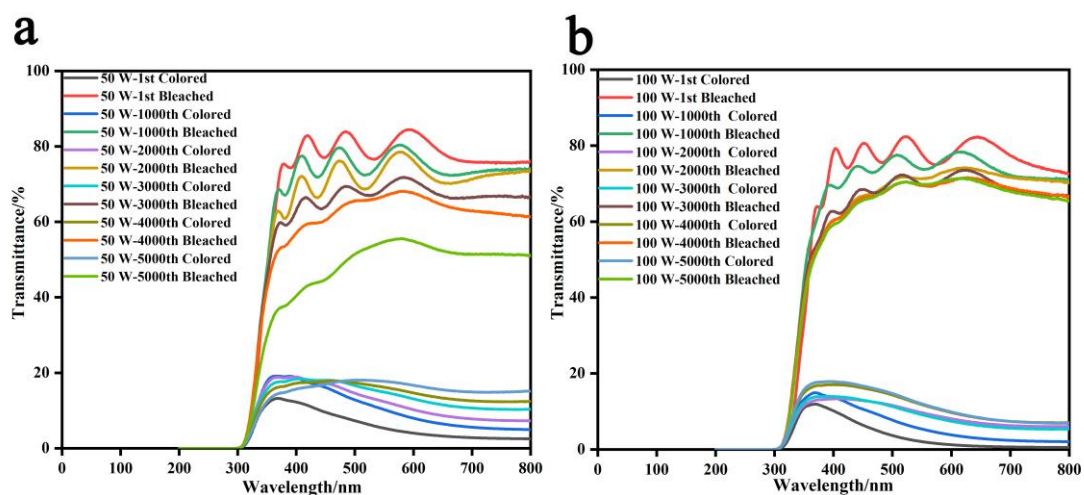


Figure S5. Evolution of transmittance spectra of the WO₃ films during 5000 cyclic voltammetry (CV) cycles, **a** 50 W; **b** 100 W.

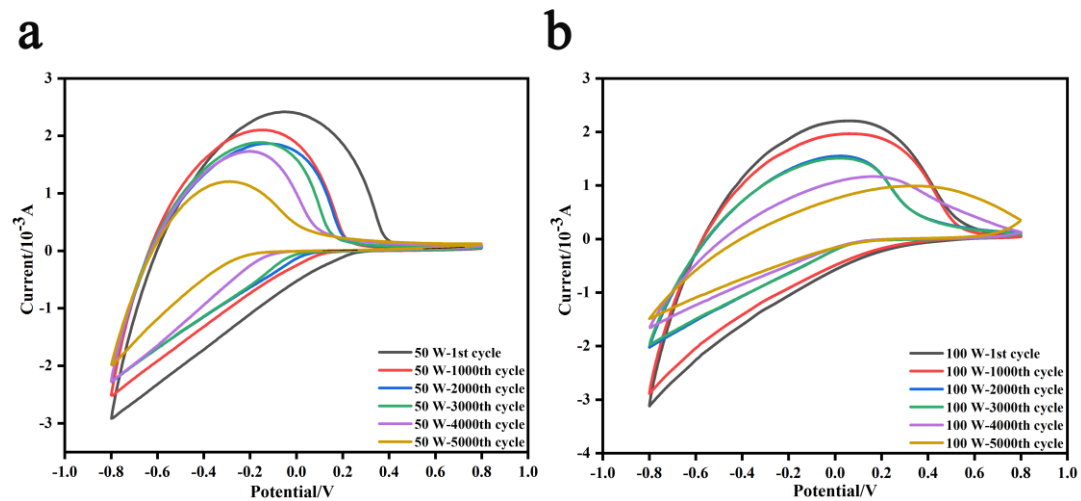


Figure S6. Evolution of CV curves of the WO_3 films during 5000 CV cycles at the scanning rate of 0.1 V/s versus Ag/AgCl, **a** 50 W; **b** 100 W.

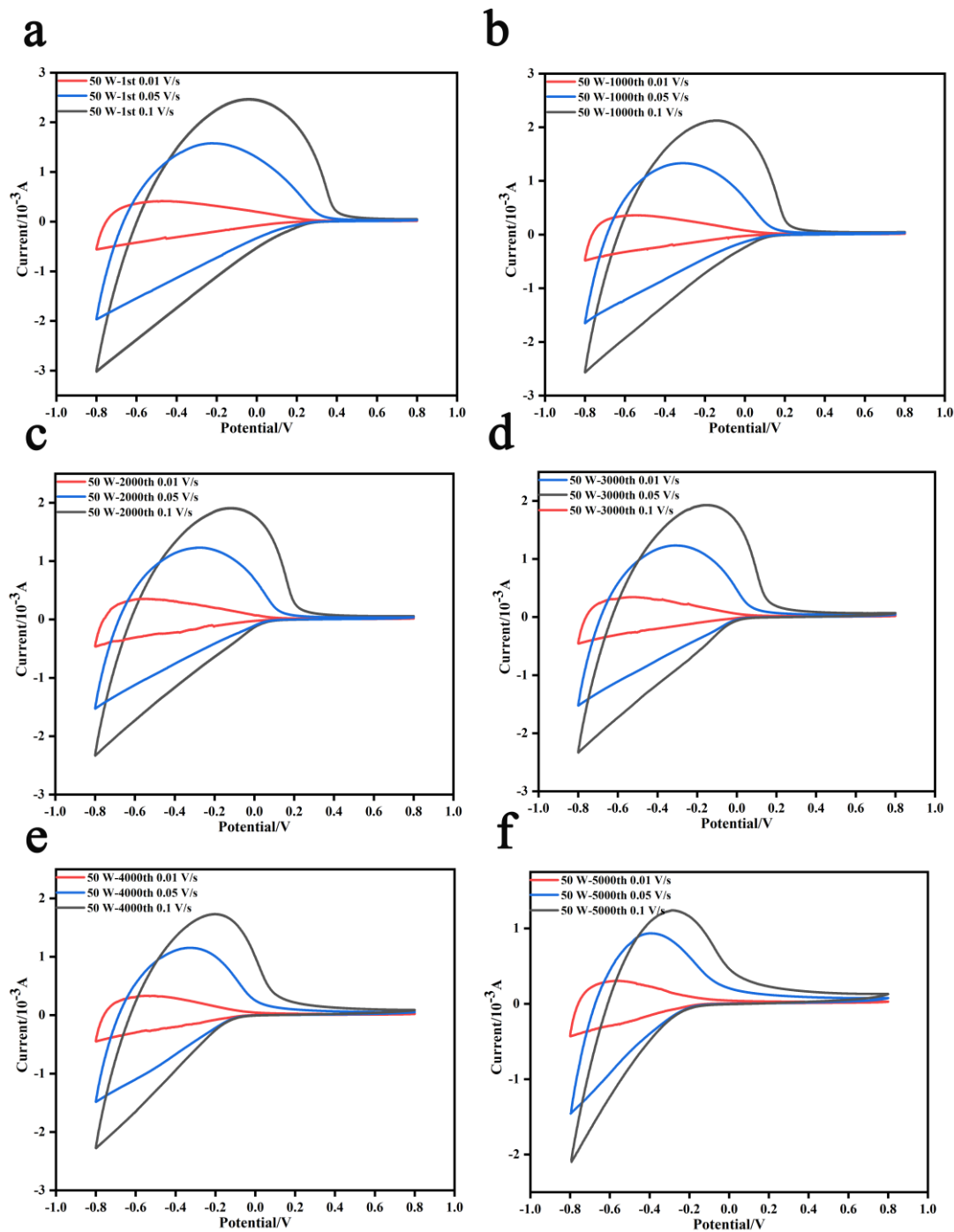


Figure S7. CV curves of the 50W-deposited WO_3 film during 5000 CV cycles at scanning rates ranging from 0.01 to 0.1 V/s versus Ag/AgCl, **a** the first cycle; **b** the 1000th cycle; **c** the 2000th cycle; **d** the 3000th cycle; **e** the 4000th cycle; **f** the 5000th cycle.

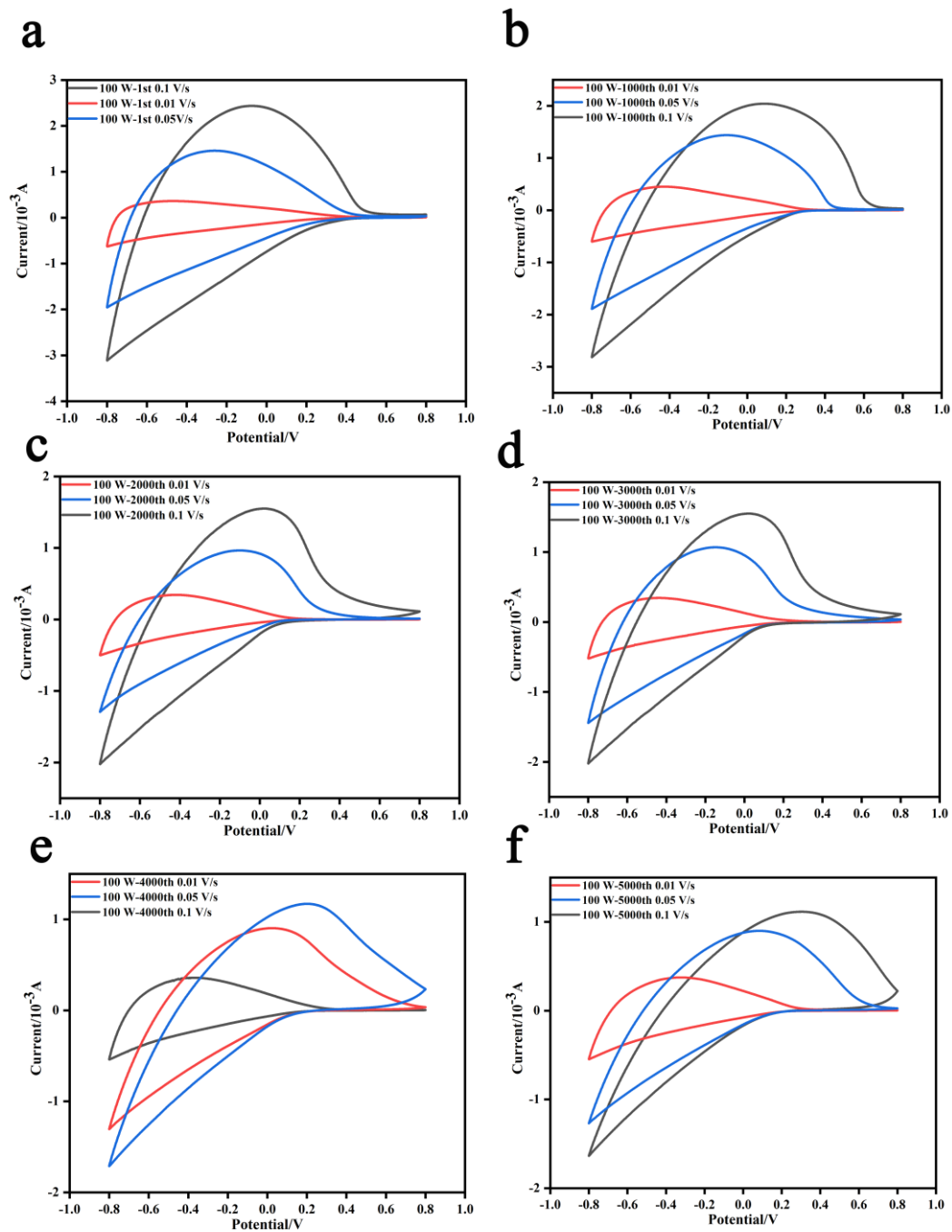


Figure S8. CV curves of the 100W-deposited WO_3 film during 5000 CV cycles at scanning rates ranging from 0.01 to 0.1 V/s versus Ag/AgCl, **a** the first cycle; **b** the 1000th cycle; **c** the 2000th cycle; **d** the 3000th cycle; **e** the 4000th cycle; **f** the 5000th cycle.

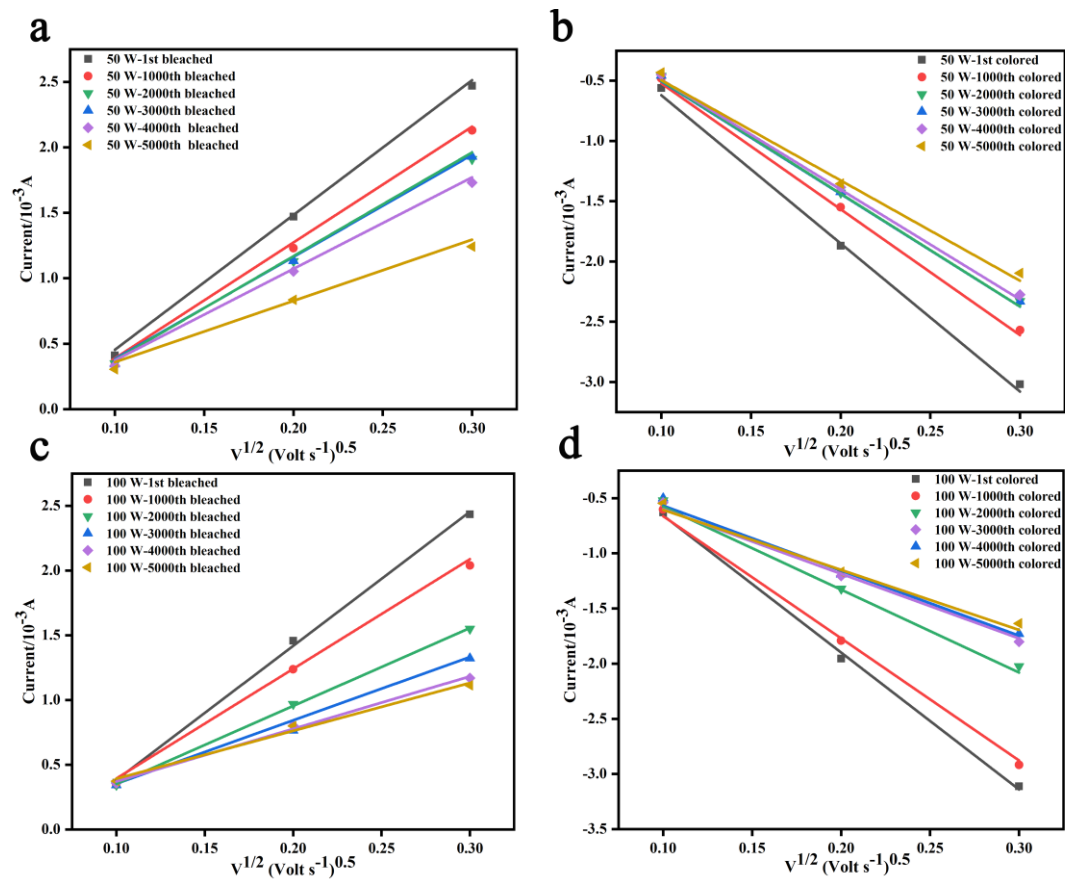


Figure S9. Evolution of the redox peaks versus square root of the scanning rate, **a** in bleaching process of the 50W-deposited film; **b** in coloring process of the 50W-deposited film; **c** in bleaching process of the 100W-deposited film; **d** in coloring process of the 100 W-deposited film.