

Supplementary Information

Catalytic Synergy in Palladium-Enriched Tungsten Oxide Nanogranules: Redefining Electrochromic Dynamics and Energy Storage Capabilities

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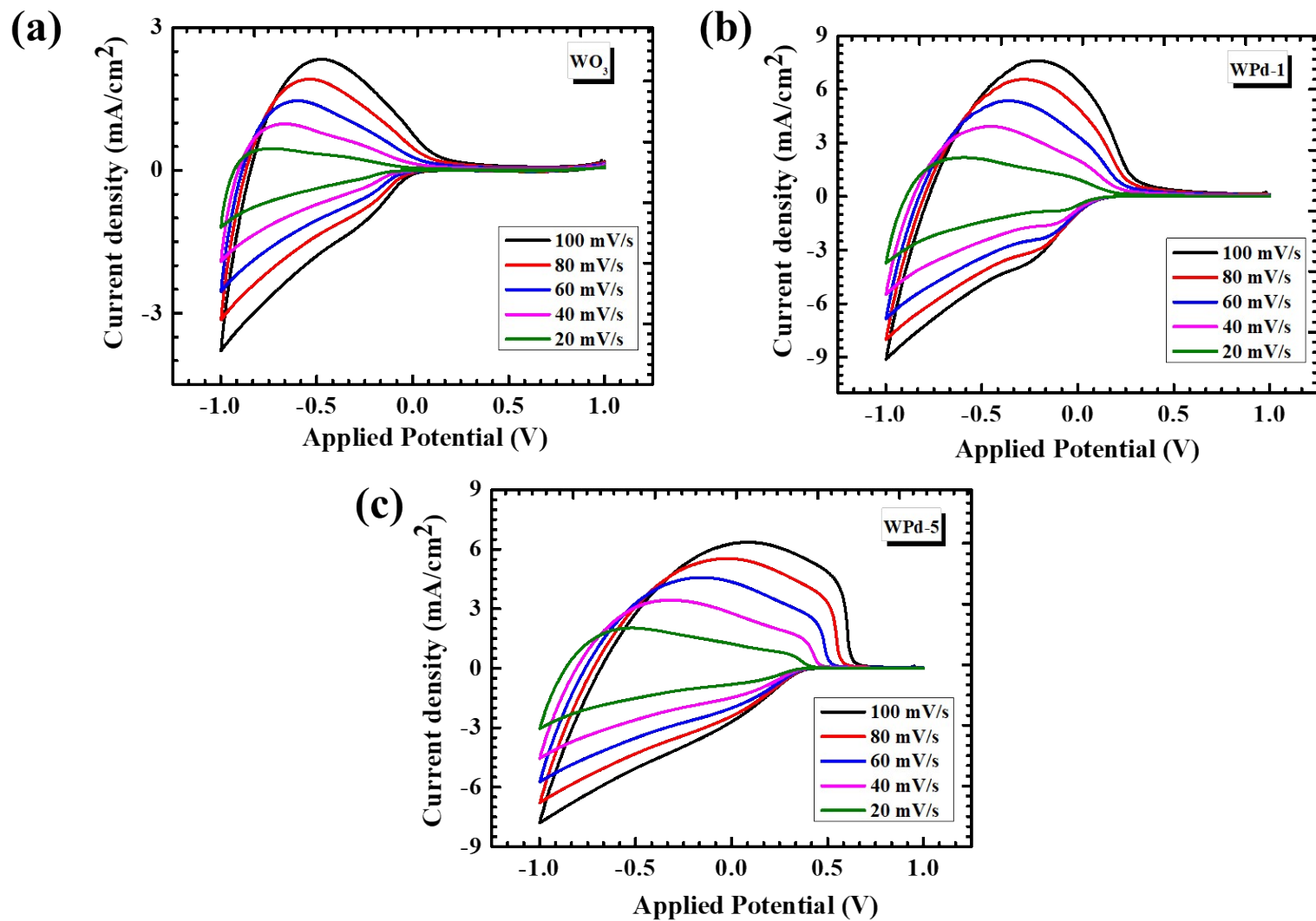


Fig. S1 Cyclic voltammetry of (a) undoped WO₃ (b) WPd-1, and (c) WPd-5 samples at different scan rates (20-100 mV/s).

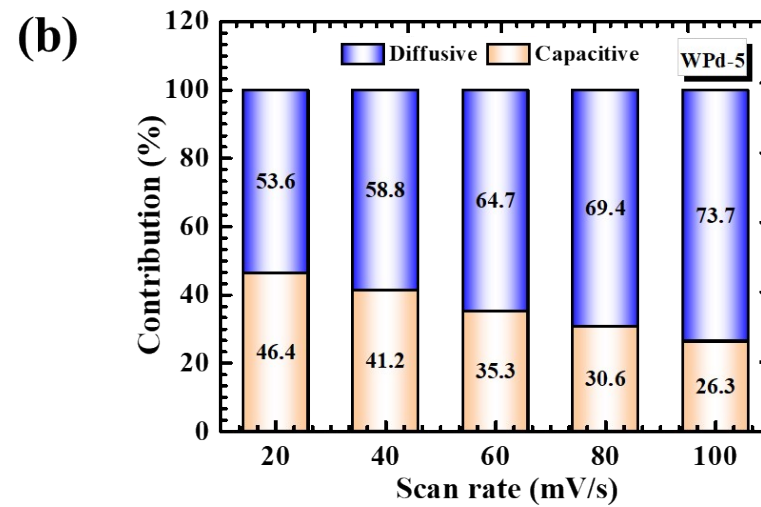
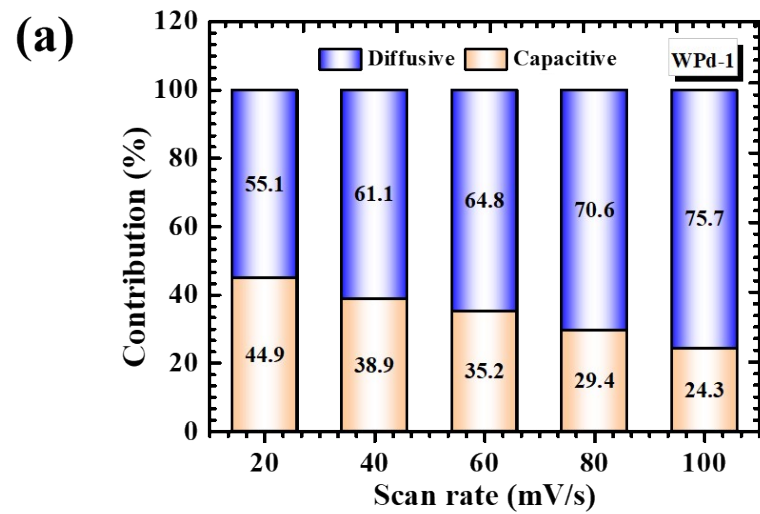


Fig. S2 Graph of capacitive and diffusive-controlled contribution percentage of (a) WPd-1, and (b) WPd-5 samples.

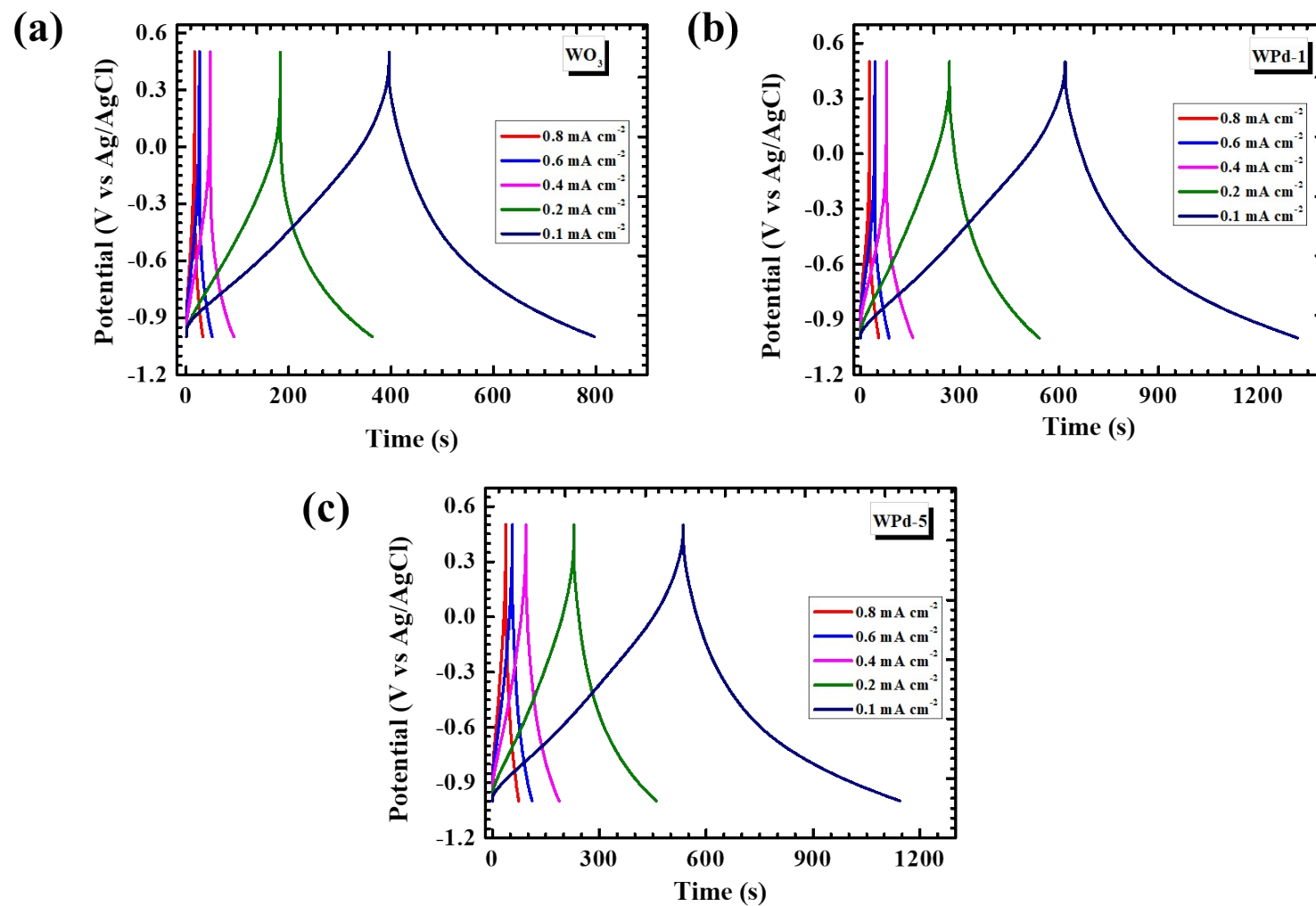


Fig. S3 Galvanostatic charge-discharge curves of (a) undoped WO₃ (b) WPd-1, and (c) WPd-5 samples at variable current densities (0.1 – 0.8 mA cm⁻²).

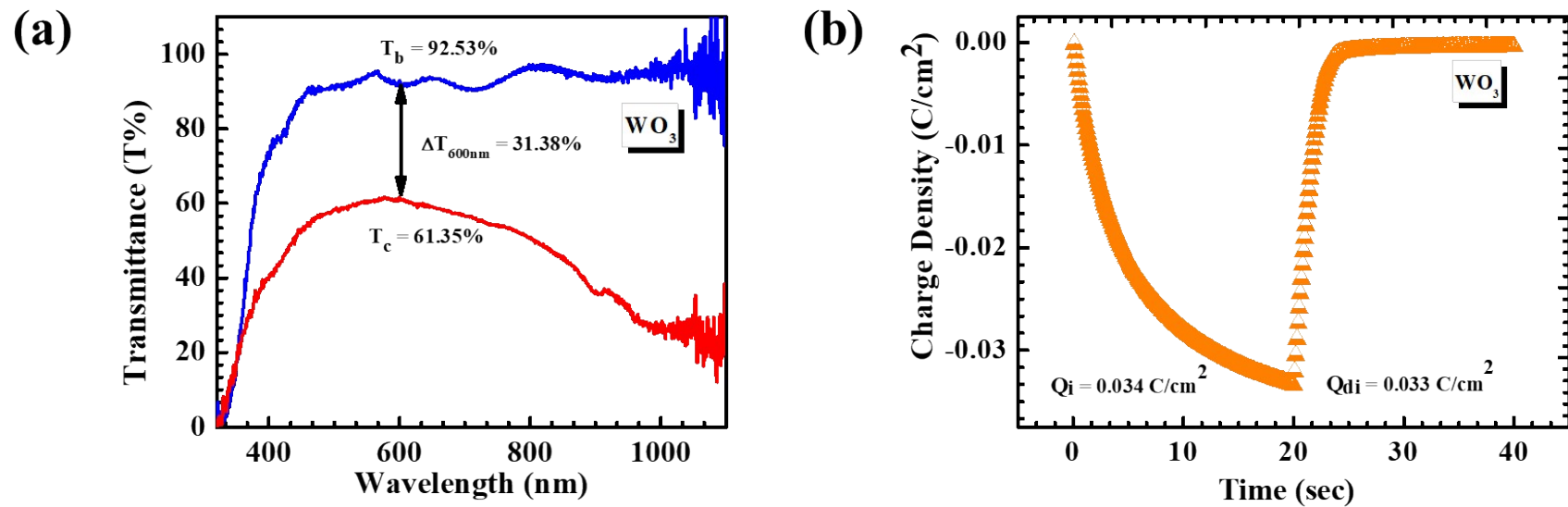


Fig. S4 (a) Optical transmittance and spectrum of undoped WO_3 thin film at the colored and bleached states from 300 to 1100 nm range over potential window ± 1 V and (b) CC trace of undoped WO_3 thin film.

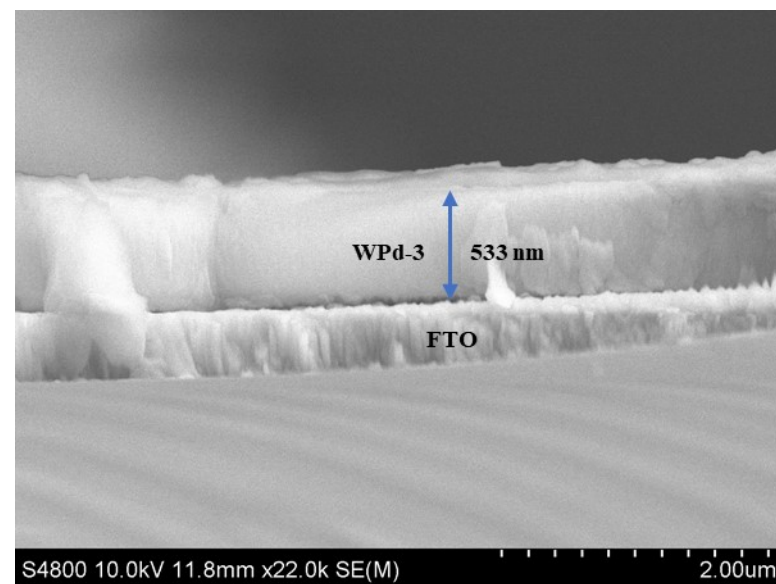


Fig. S5 Cross-sectional image of the WPd-3 device thin film.