"Nano to Nano" Electrodeposition of WO_3 Crystalline Nanoparticles for Electrochromic Coatings

Liang Liu[1,2,‡], Michael Layani[1,‡], Shai Yellinek[1], Alex Kamyshny[1], Han Ling[2], Pooi See Lee[2], Shlomo Magdassi[1,] and Daniel Mandler[1,*]*

[1]Institute of Chemistry, The Hebrew University of Jerusalem, Jerusalem 91904, Israel

[2]School of Materials Science and Engineering, Nanyang Technological University, Singapore 639798, Singapore

Supporting Information

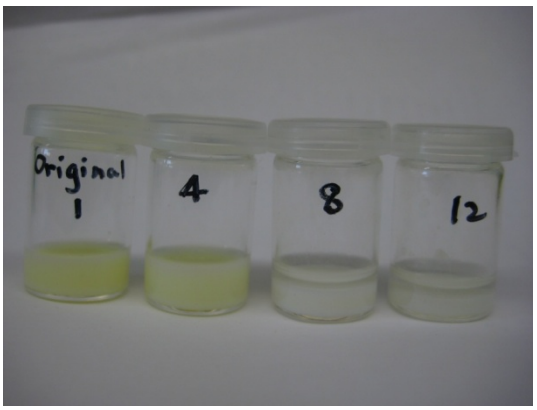

Fig. S1. Photos of 5 wt.% WO_3 dispersion at different pH after 1 h. pH from left to right: 1, 4, 8, 12. pH was adjusted by NaOH.

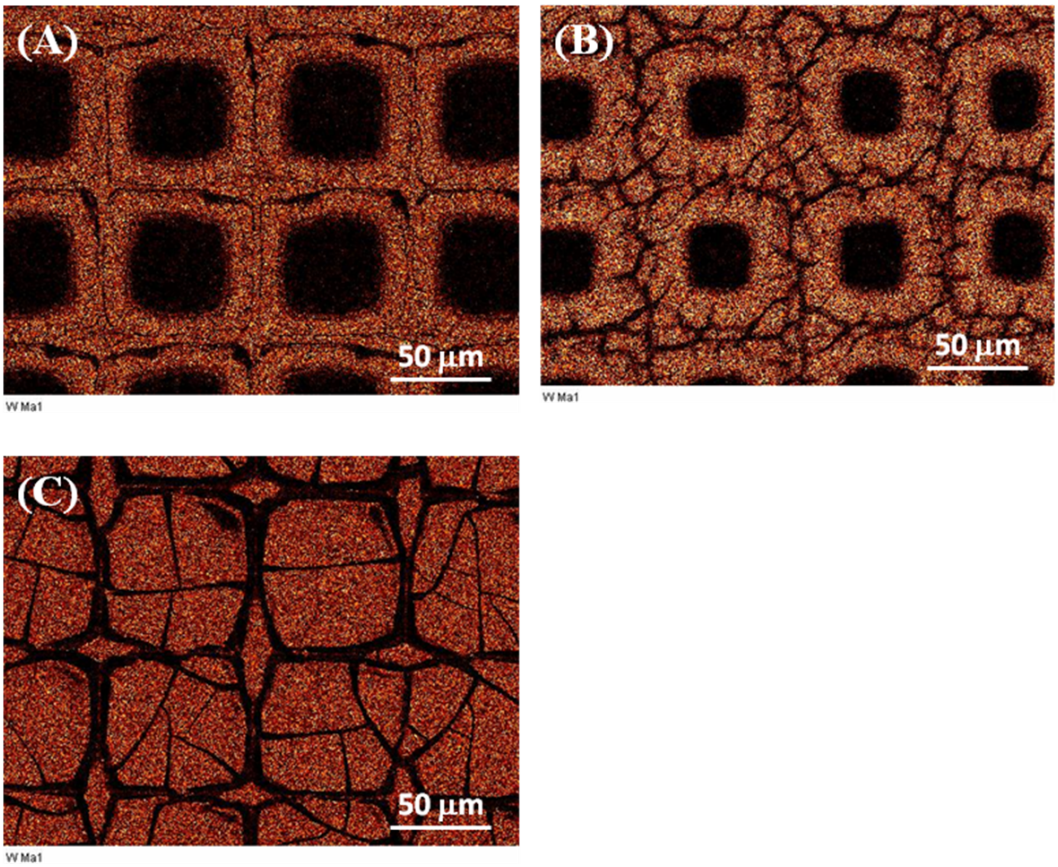

Fig. S2. EDX mapping of W for the WO_3 films electrodeposited on Ag grid/PET at −0.8 V (*vs.* Ag/AgBr QRE) for 3 min (A), 9 min (B) and 13 min (C).

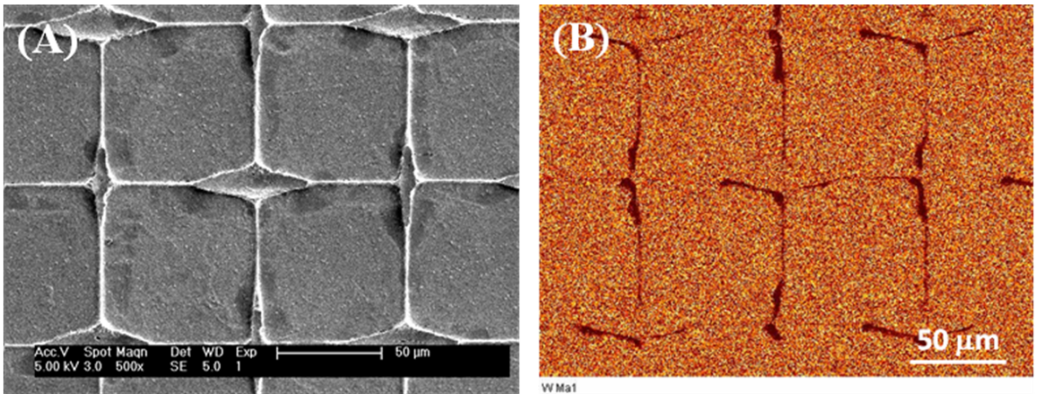

Fig. S3. SEM (A) and EDX mapping of W (B) for the WO_3 films electrodeposited on Ag grid/PET at −1.1 V (*vs.* Ag/AgBr QRE) for 30 s.

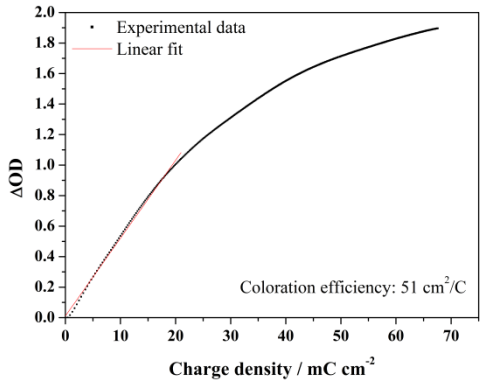

Fig. S4. Coloration efficiency of WO_3 films electrodeposited at −1.1 V (*vs.* Ag/AgBr QRE) for 100 s on ITO.

Video S1. Demonstration of coloring and bleaching of the optimal nano-crystalline WO_3 film electrodeposited on ITO.