Supplementary Information

Blue to Highly Transmissive Soluble Electrochromic Based on Poly(3,4-propylenedioxyxyselenophene) with High Stability and Coloration Efficiency

Merve İcli Özkut, Samed Atak, Ahmet M. Önal and Atilla Cihaner

Figure S1. $^1$H NMR of ProDOS-C$_{10}$. 
Figure S2. $^{13}$C NMR of ProDOS-C$_{10}$. 
Figure S3. FTIR of ProDOS-C$_{10}$.
Figure S4. Cyclic voltamograms of ProDOT-C_{10} and ProDOS-C_{10} in 0.1 M TBAH/DCM at a scan rate of 100 mV/s vs. Ag/AgCl.

Figure S5. Scan rate dependence of PProDOS-C_{10} film on a Pt disk electrode in 0.1 M TBAH/ACN at different scan rates between 20 mV/s and 200 mV/s with an increment of 20 mV/s. (b) Relationship of anodic and cathodic current peaks as a function of scan rate between neutral and oxidized states of PProDOS-C_{10} film in 0.1M TBAH/ACN.
Figure S6. Optical absorption spectra of PProDOT-C_{10} on ITO in 0.1 M TBAH/ACN at various applied potentials between 0.0 V and 1.0 V.

Figure S7. Absorption spectra of PProDOS-C_{10} film (a) coated on ITO electrode and (b) after dissolving in THF.