

## Supporting Information

### **Color brightness modulation of responsive photonic liquid for multicolored electrochromic displays**

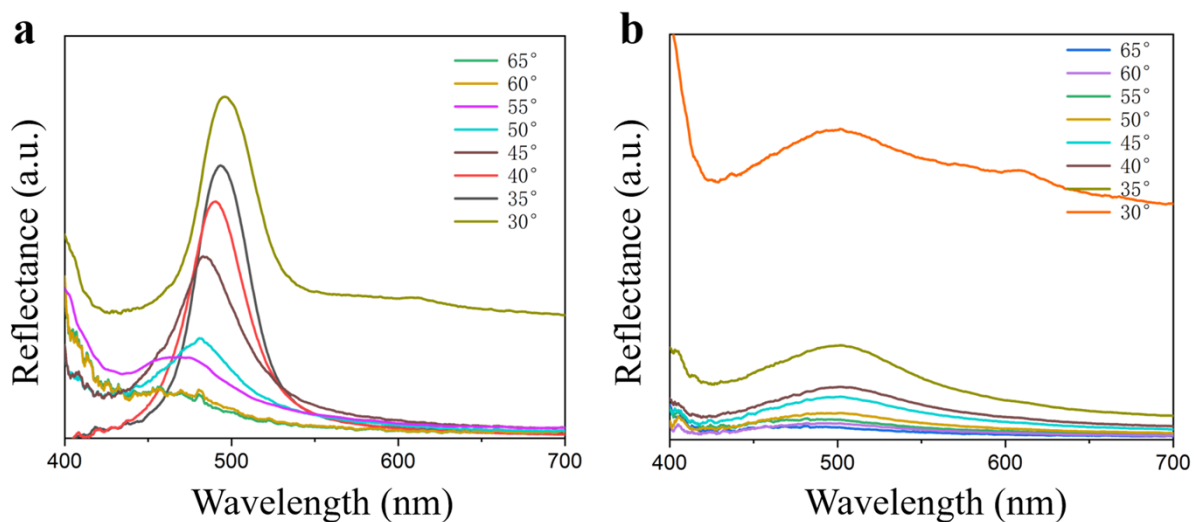
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This PDF includes:

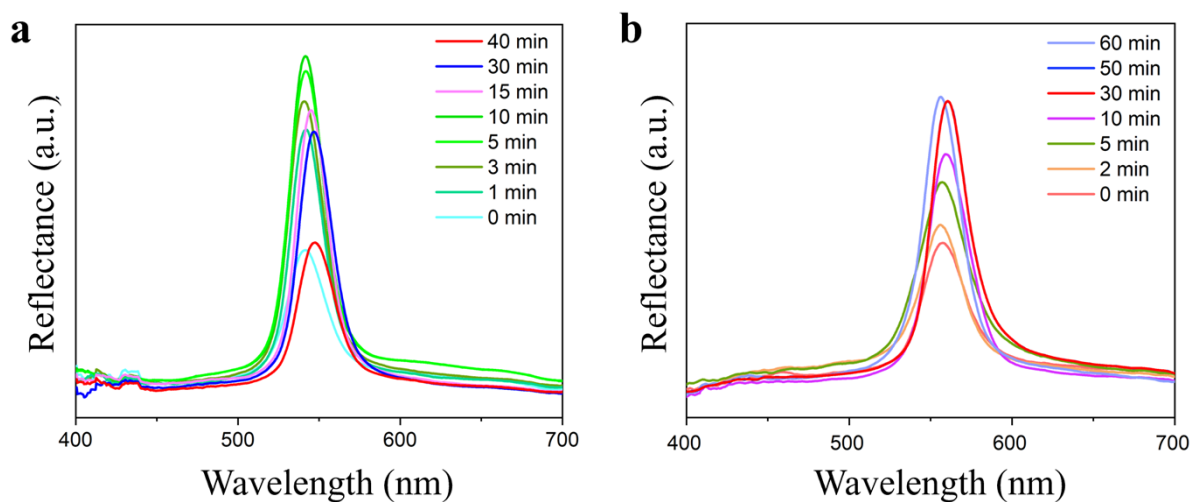
Figure S1 to S5

Table S1

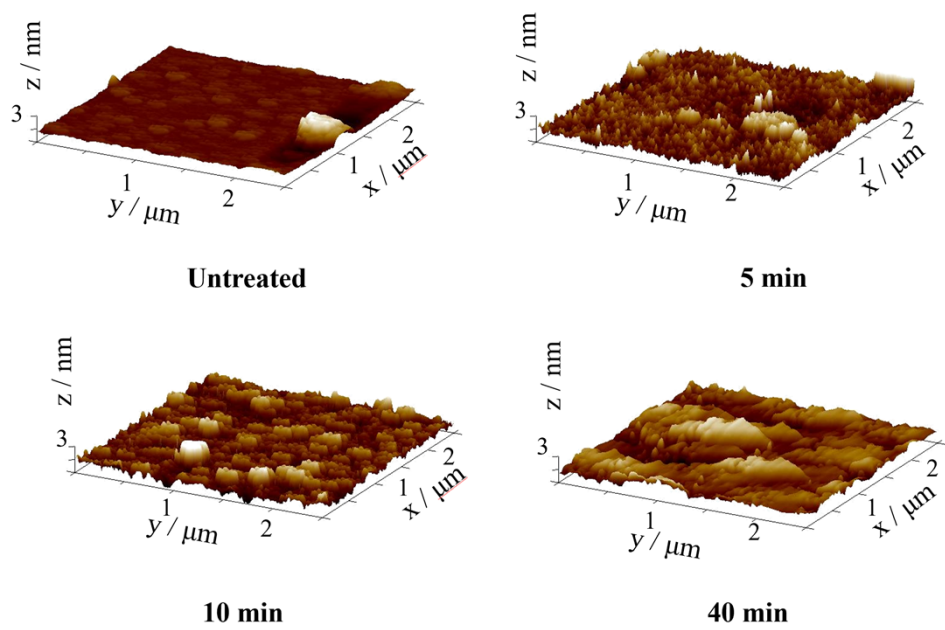
Legends for Video S1 and Video S2



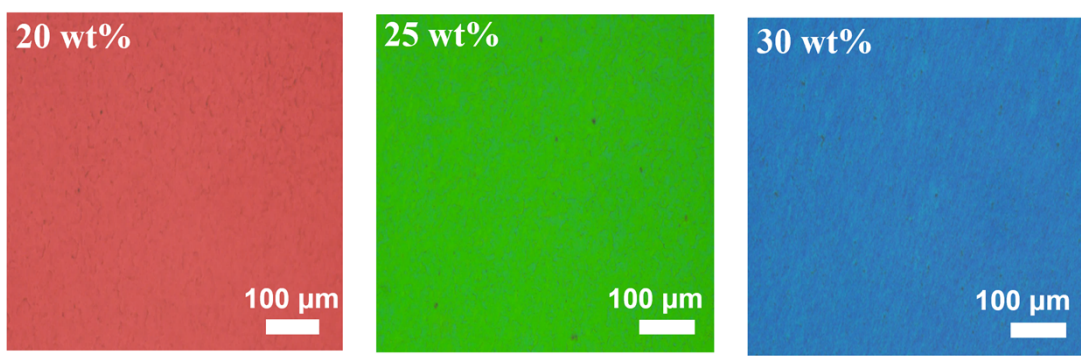
**Figure S1.** Reflection spectra of SCD with treated (a) and untreated ITO (b) electrodes at various viewing angles.



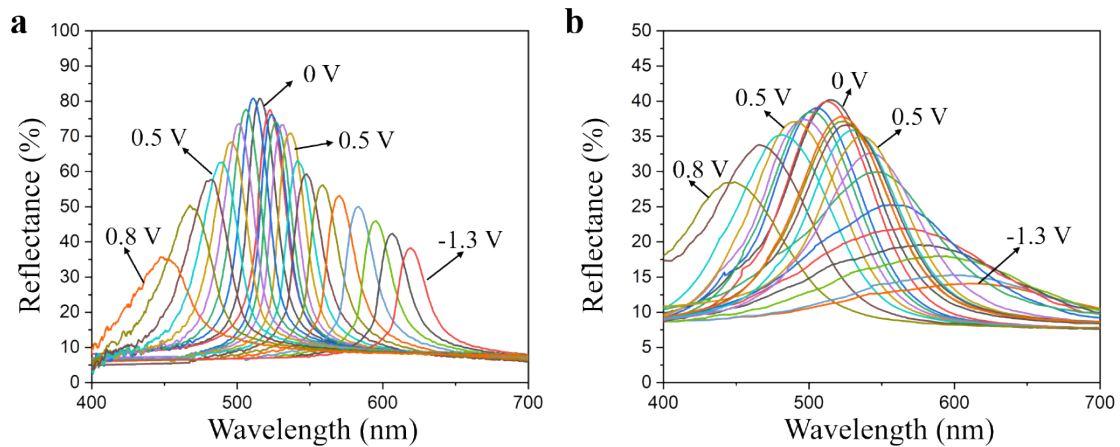
**Figure S2.** (a) Reflectance spectra of SCD with various time of O<sub>2</sub> plasma treatment.  
 (b) Reflectance spectra of SCD with various time of PDDA soaking treatment.



**Figure S3.** AFM topographic images ITO electrode treated for different time.



**Figure S4.** Optical microscopic images of SCD with various NPs concentration.



**Figure S5.** Reflection spectra of SCD with treated (a) and untreated ITO (b) electrodes at different voltages.

**Table S1.** Reflectance and FWHM of SCD with various mass fraction liquid colloidal crystal and untreated/treated ITO glass

	Blue (30 wt%)		Green (25 wt%)		Red (20 wt%)	
	Untreated	Treated	Untreated	Treated	Untreated	Treated
R (%)	30.8	66.4	37.8	80.8	46.8	96.2
FWHM	70.6	28.1	58.7	33.6	61.3	38.6

Legends for the supplementary videos

Video S1 Dynamic modulation of patterned SCD with enhanced brightness

Video S2 Smart optical display with local independent control