Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C

Supporting Information

Light-induced Saturation Change in the Angle-independent Structural Coloration of Colloidal Amorphous Arrays

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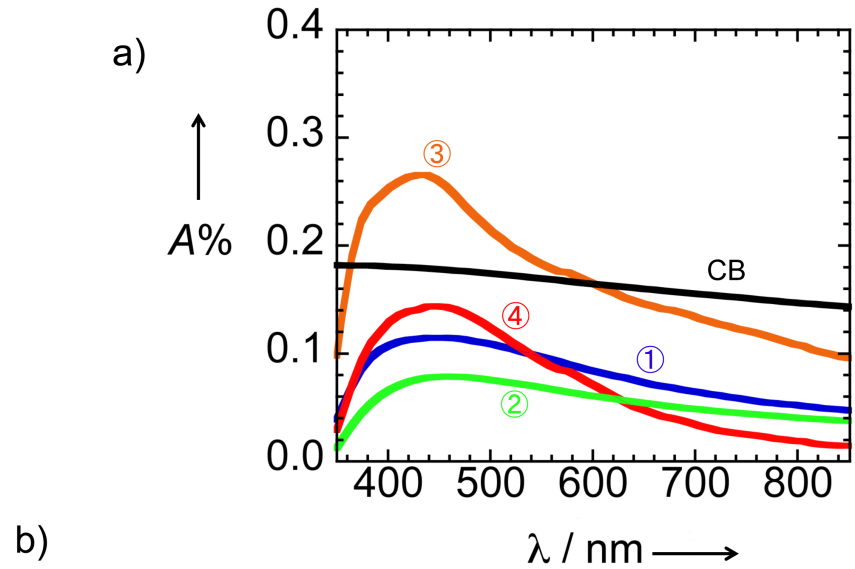
Figure S1



b)

water:ethanol (v:v)	1:0	1:0	1:1	1:1
Light intensity [mJ/cm^2]	900	60	900	60

Figure S1. a) Absorption spectra of thin membranes composed of titanium oxide particles soaked with silver nitrate solutions (1 mol/L) with different solvent conditions after irradiation with different intensities of 313-pnm UV light using a bandpass filter. In the case of a 1:1 water–ethanol mixed solvent, the absorption at the lower wavelength of TiO_2–Ag particle composite membranes became stronger. In contrast, the TiO_2–Ag particle composite membranes prepared using an aqueous solution absorbed visible light relatively uniformly across the entire visible region. The absorption spectrum of a carbon black dispersed solution is presented for comparison. b) Optical images of thin membranes composed of titanium oxide particles soaked with silver nitrate solutions before and after being irradiated with 313-nm UV light passed through a bandpass filter.

Figure S2

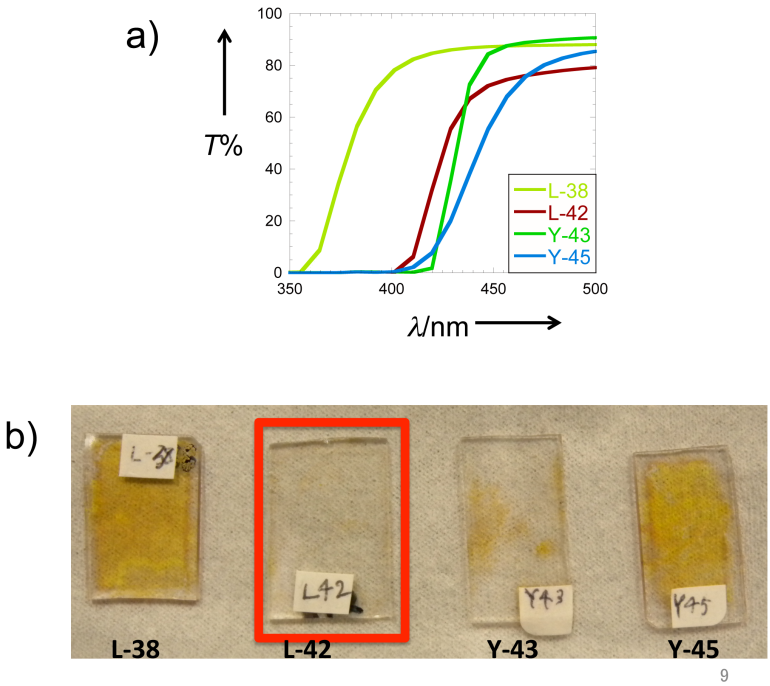


Figure S2. a) Transmittance spectra of the various cutoff filters. b) Optical images of the thin membranes composed of titanium oxide particles after the irradiation of the TiO_2–Ag particle composite membranes with visible light using these cutoff filters.