Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.
This journal is © The Royal Society of Chemistry 2023

Supporting Information

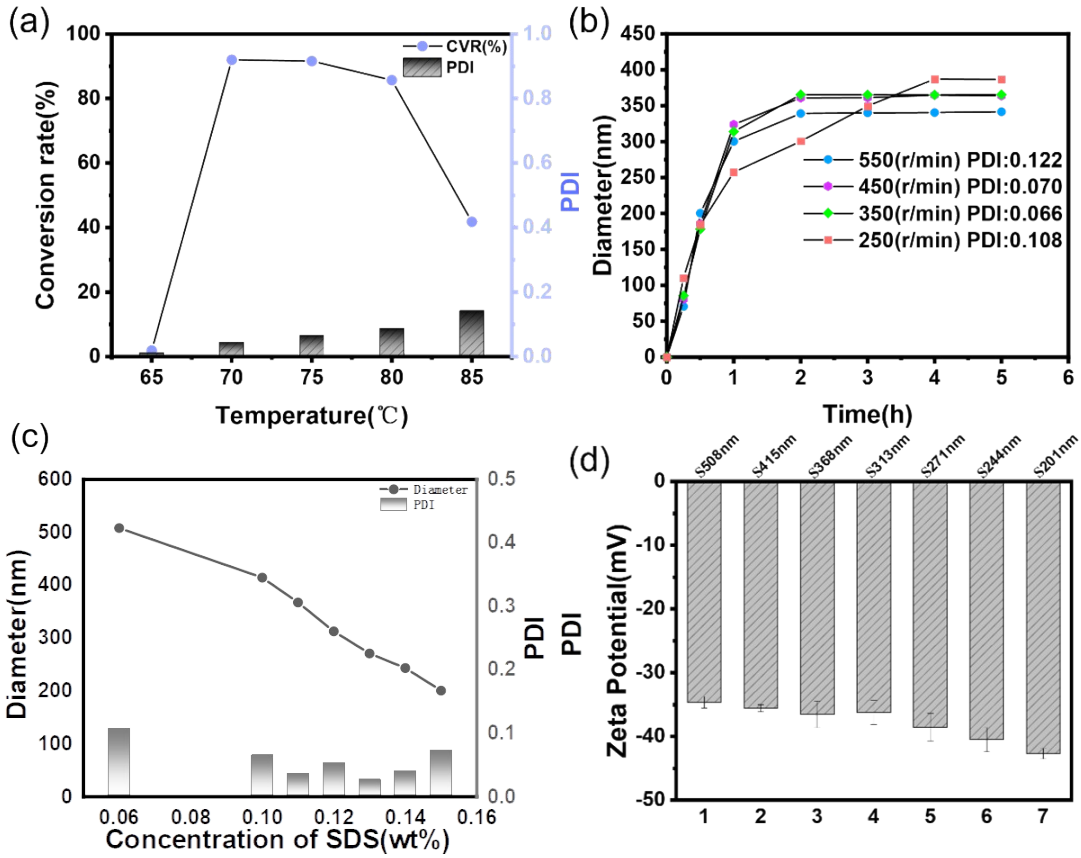

Figure S1 (a) Effect of temperature on conversion rate of MMA monomer and monodispersity of colloidal PMMA nanospheres; (b) Effect of stirring rate on particle size and monodispersity of colloidal PMMA nanospheres; (c) Effect of emulsifier (SDS) dosage on particle size and monodispersity of colloidal PMMA nanospheres; (d) Zeta potential of colloidal PMMA nanospheres with various particle sizes.

Table S1 Effect of initiator dosage on particle size and monodispersity of colloidal PMMA nanospheres

Sample number	KPS（wt%）	Dm(nm)	PDI	pH
1	0.11	Incomplete reaction		
2	0.17	379.6	0.047	7
3	0.22	367.5	0.031	6
5	0.33	385.3	0.084	6
7	0.44	363.3	0.028	6
8	0.50	503.0	0.227	4
9	0.56	481.6	0.310	3

Figure S2 Angle-dependent structural colors of PMMA photonic crystals on fabric substrate.

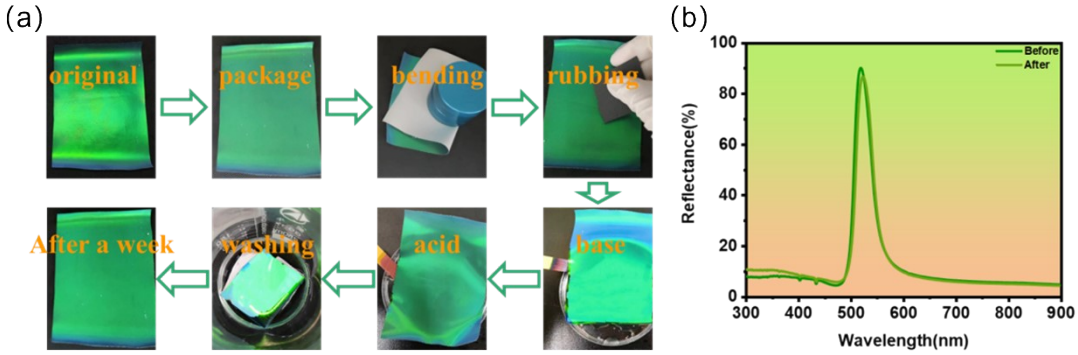

Figure S3 (a) Fastness test of structurally colored fabric with PMMA photonic crystals; (b) Reflectance curves before and after the test.

Testing conditions for washing fastness: sample size 40 mm x 100 mm; test solution containing 5 g/L of soap flakes and 2 g/L of anhydrous sodium carbonate; washing at 40 ℃ for 30 min.

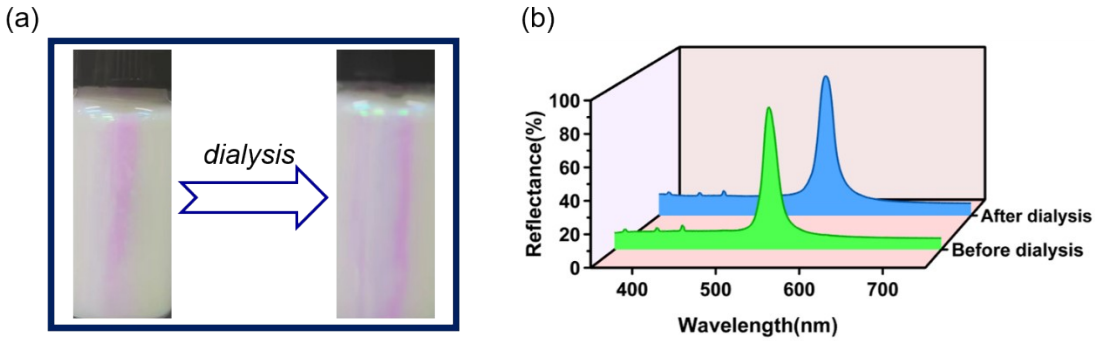

Figure S4 (a) PMMA liquid photonic crystals before and after dialysis; (b) Corresponding reflectance spectra.