

Electronic Supplementary Information

**Elastomer-immobilized tunable colloidal photonic crystal films with high optical qualities and high maximum strain**

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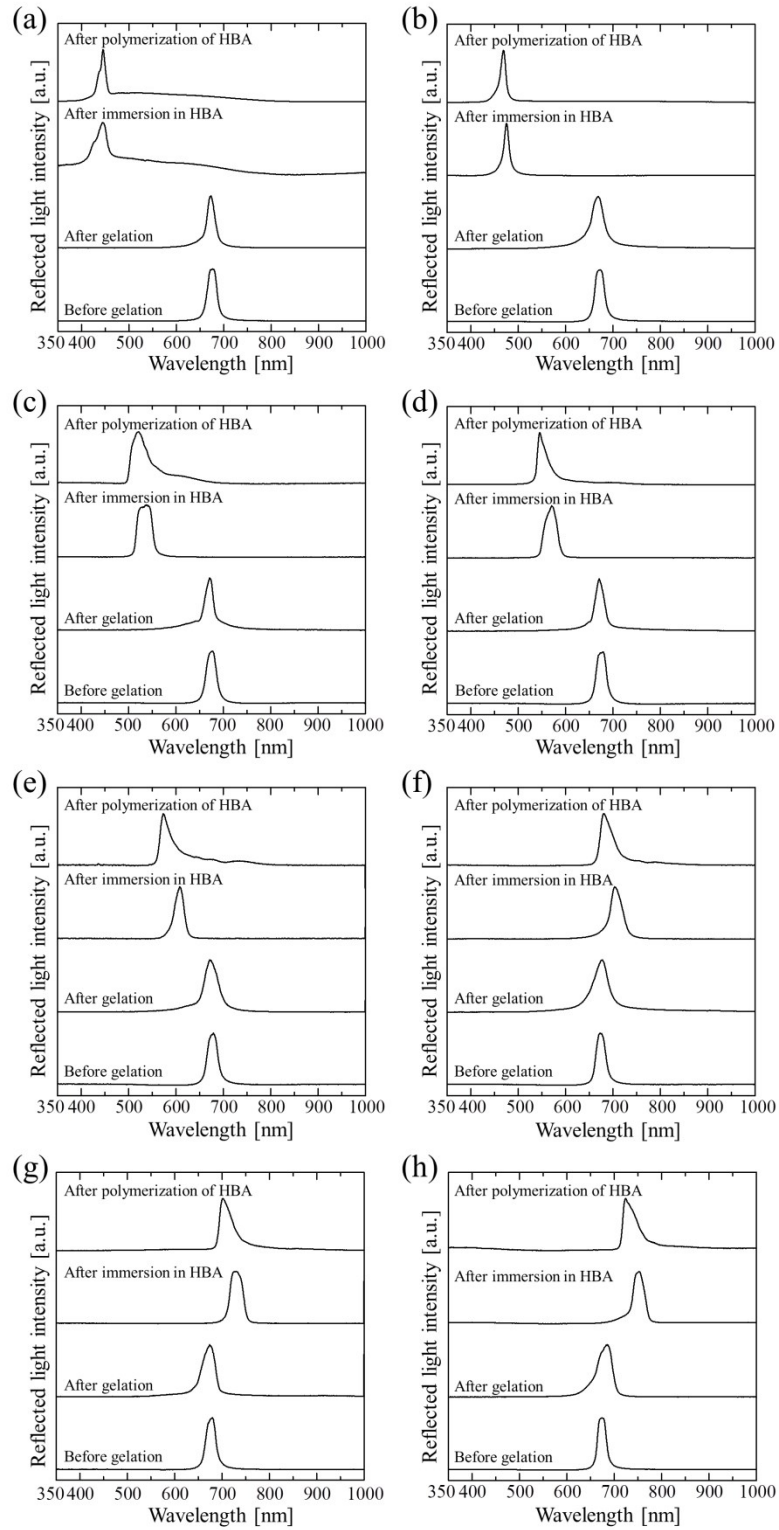


Fig. S1 Reflection spectra of the colloidal crystal films with the *N*-isopropylacrylamide (NIPAM) mole fraction of (a)  $x = 0$ , (b)  $x = 0.20$ , (c)  $x = 0.30$ , (d)  $x = 0.35$ , (e)  $x = 0.40$ , (f)  $x = 0.60$ , (g)  $x = 0.80$ , and (h)  $x = 1.0$  at each preparation step.

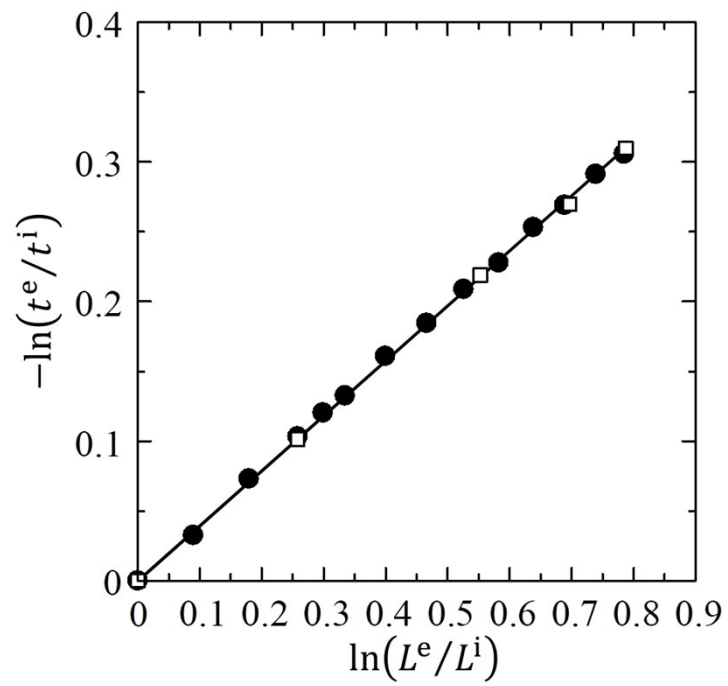


Fig. S2 Plots of true strains in the thickness direction vs. those in the stretching direction (●: elastomer film with  $x = 0.50$ , □: elastomer film without particles).