

Supporting information

# A Biomass Based Photonic Crystal Hydrogel Made of *Bletilla striata* Polysaccharide

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Figure S1. A photo of the *Bletilla striata*.

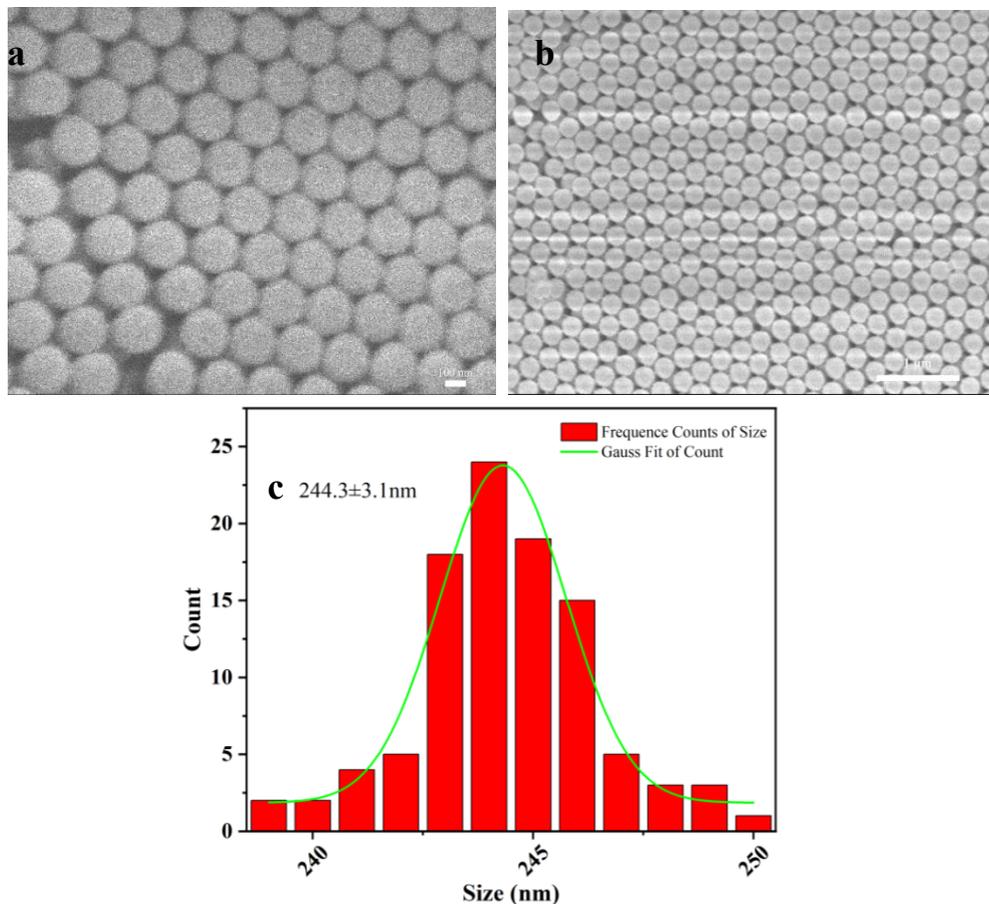


Figure S2. SEM images of PMMA nanospheres (a), 3D photonic crystals (b), and particle size distribution of PMMA nanospheres(c).

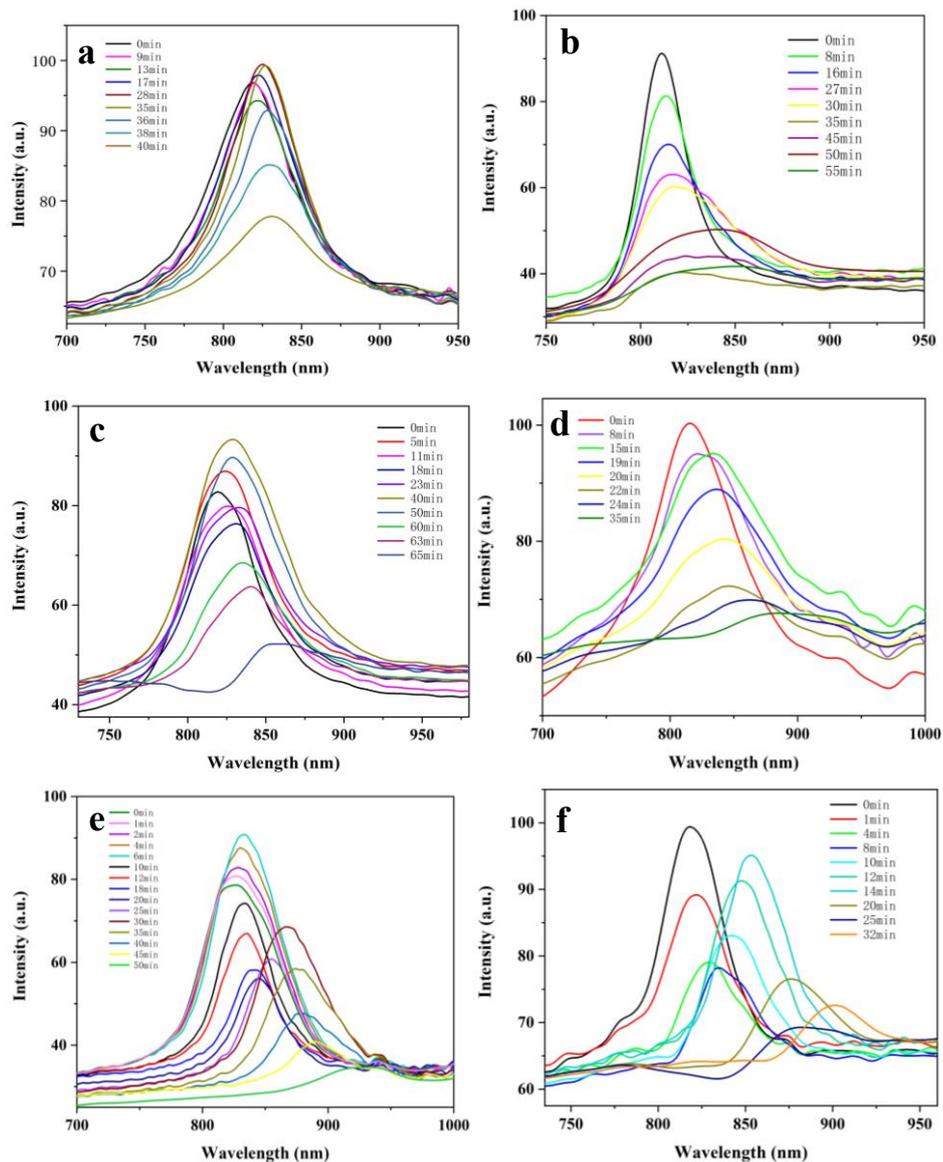


Figure S3. Response of PhCs hydrogels with different BSP contents(5% (a), 8% (b), 10% (c), 12% (d), 15% (e), 20% (f)) to 30%  $H_2O_2$ .

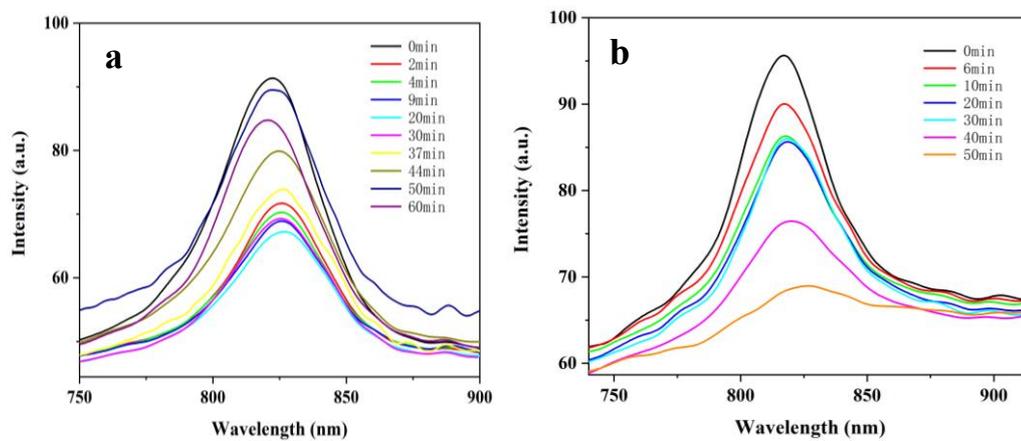


Figure S4. Control group (a) response of PhCs hydrogels with 15% BSP content to  $H_2O$ . (b) response of PhCs hydrogels with 0% BSP content to  $H_2O$ .

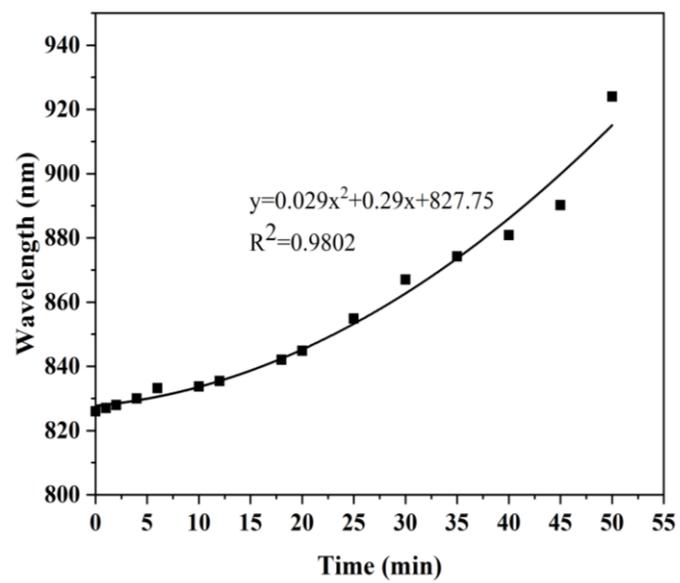


Figure S5. Reflection wavelength-time relationship of PhCs hydrogels with 15% BSP content.