

Supporting Information

Advanced Stimuli-Responsive Structure Based on 4D Aerogel and Covalent Organic Frameworks Composite for Rapid Reduction in Tetracycline Pollution

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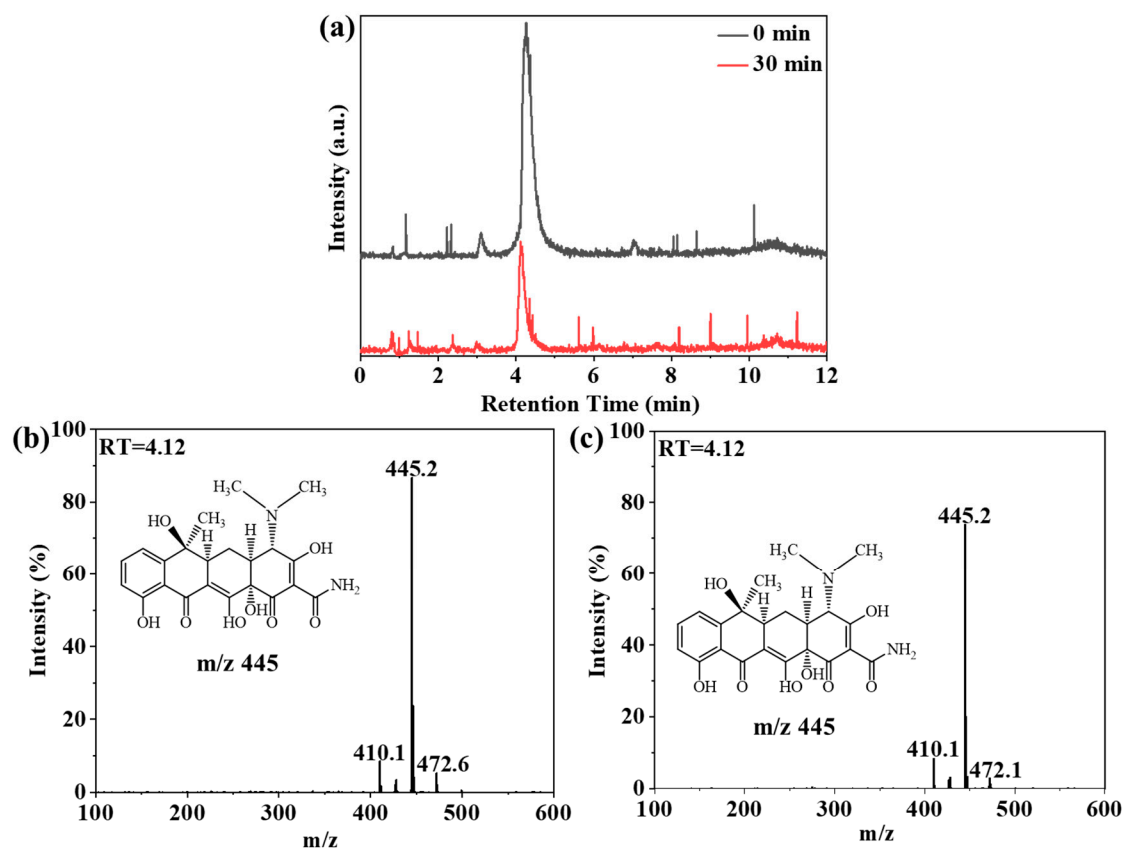


Figure S1. (a) Liquid chromatograms of photo-catalytic degradation of TC in the presence of the COF-1/BiPO₄ for different photo-catalytic reaction times: 0 min and 30 min. Mass spectra at retention time (RT) = 4.12 min for photo-catalytic degradation of TC in the presence of the COF-1/BiPO₄: (b) photo-catalytic reaction times 0 min and (c) photo-catalytic reaction times 30 min.

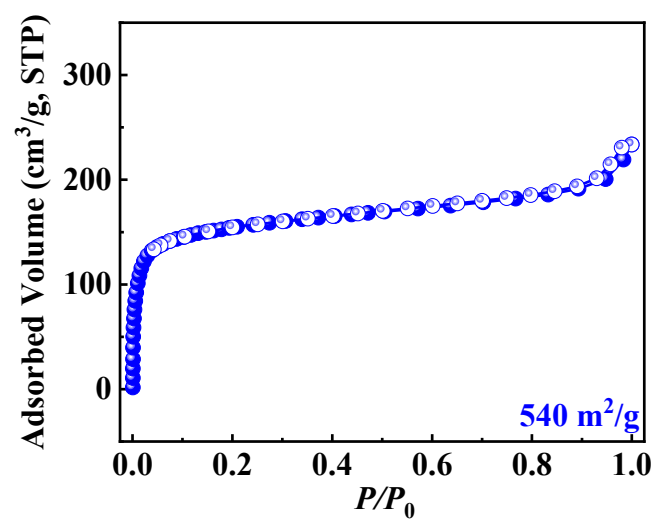


Figure S2. N₂ adsorption-desorption isotherms of COF-1.

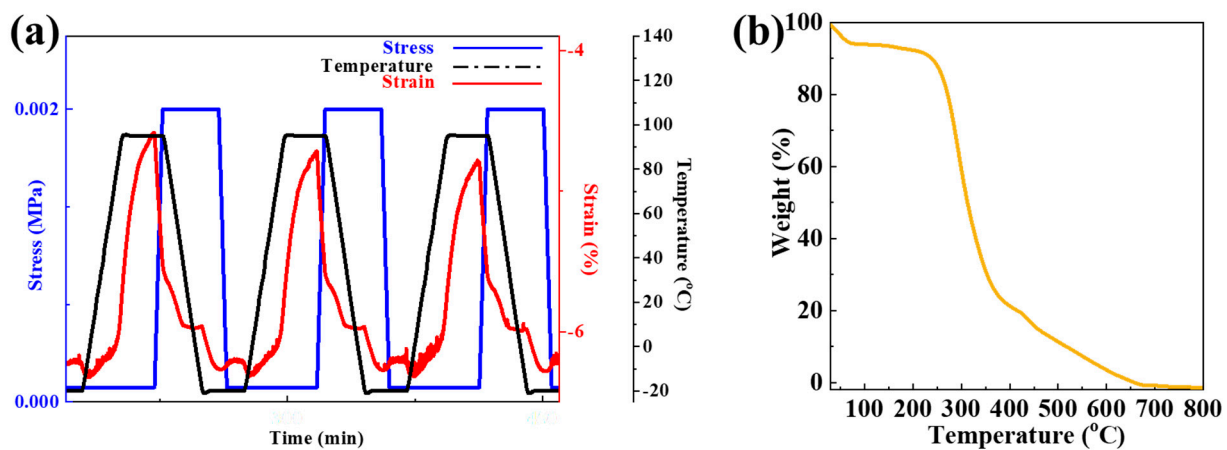


Figure S3. (a) Cyclic thermodynamic compression experiment and (b) TGA curve of P4D.



Figure S4. Thermal-induced shape memory process of COF-1/BiPO₄@P4D.

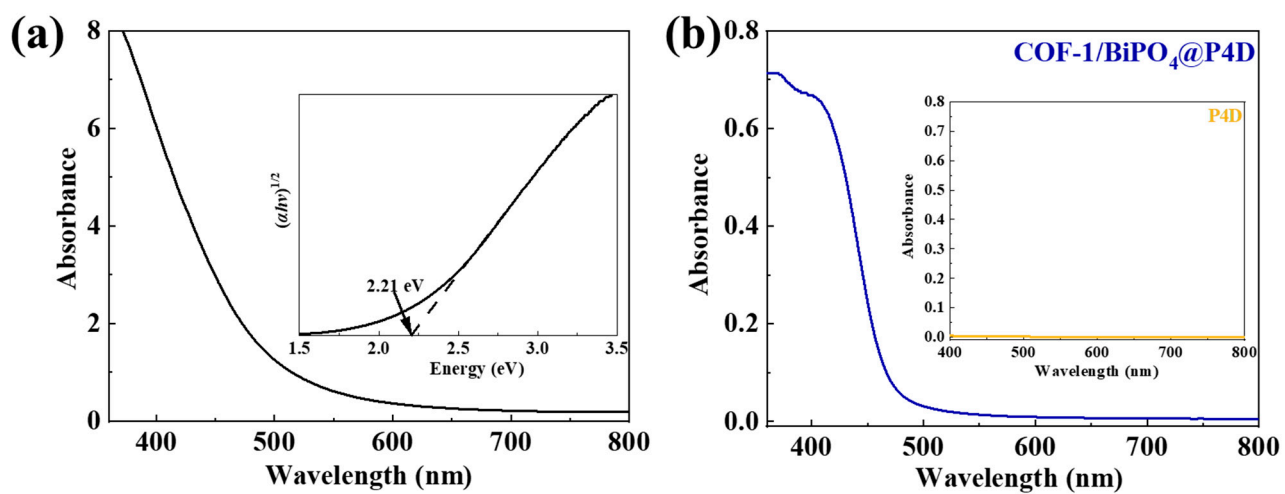


Figure S5. The optical property of (a) the COF-1/BiPO₄ and (b) COF-1/BiPO₄@P4D (illustration is DRS of P4D).

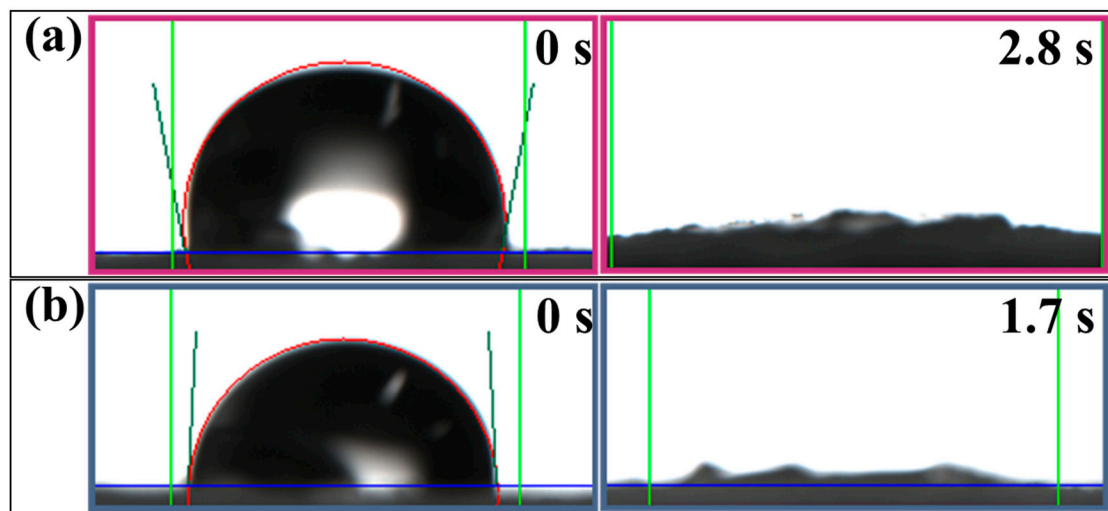


Figure S6. (a) The contact angel images of P4D at 0 s and 2.8 s after touching with water drop, respectively. (b) The contact angel images of COF-1/BiPO₄@P4D at 0 s and 1.7 s after touching with water drop, respectively.

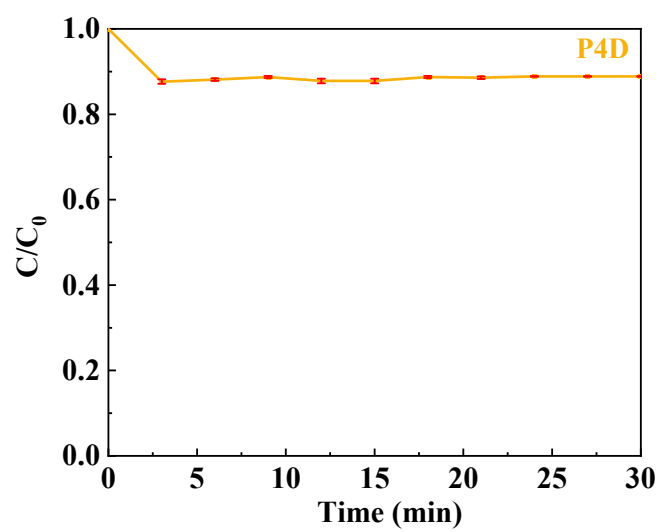


Figure S7. The P4D of the pre-fixed temporary compressed shape to reduce TC pollution ratio curve.