Supporting Information

pH-responsive on-demand eugenol release from metal-organic framework for synergistic bacteria killing

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Determination of standard curves for eugenol ethanol solutions

Dissolve 0.1000 g of eugenol solution with a small amount of ethanol, transfer to a 100 mL of volumetric bottle, and dilute with ethanol solution until the concentration of eugenol solution is 1 mg mL^{-1}. Absorb 10 mL of the 1 mg mL^{-1} solution into a 100 mL of volumetric bottle and dilute it with ethanol solution until the concentration of eugenol solution is 0.1 mg mL^{-1}. Five colorimetric tubes were taken and pipeted with 1.00, 2.00, 3.00, 4.00, 5.00 mL of eugenol solution (0.1 mg mL^{-1}). The concentration of eugenol standard solution was 0.01, 0.02, 0.03, 0.04, 0.05 mg mL^{-1} when ethanol was added to the 10 mL scale. The standard curve of eugenol was determined by UV-Vis measurements at 280 nm.

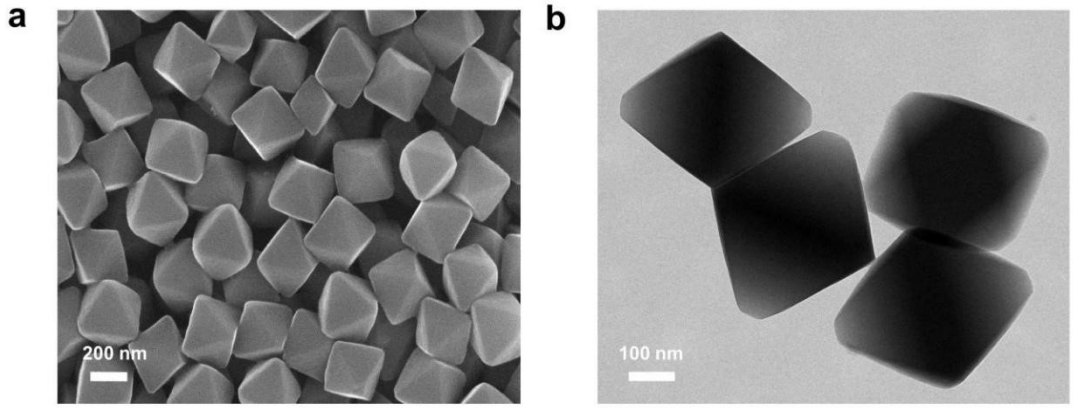

Fig. S1 (a) SEM image and (b) TEM image of B-UiO-66.

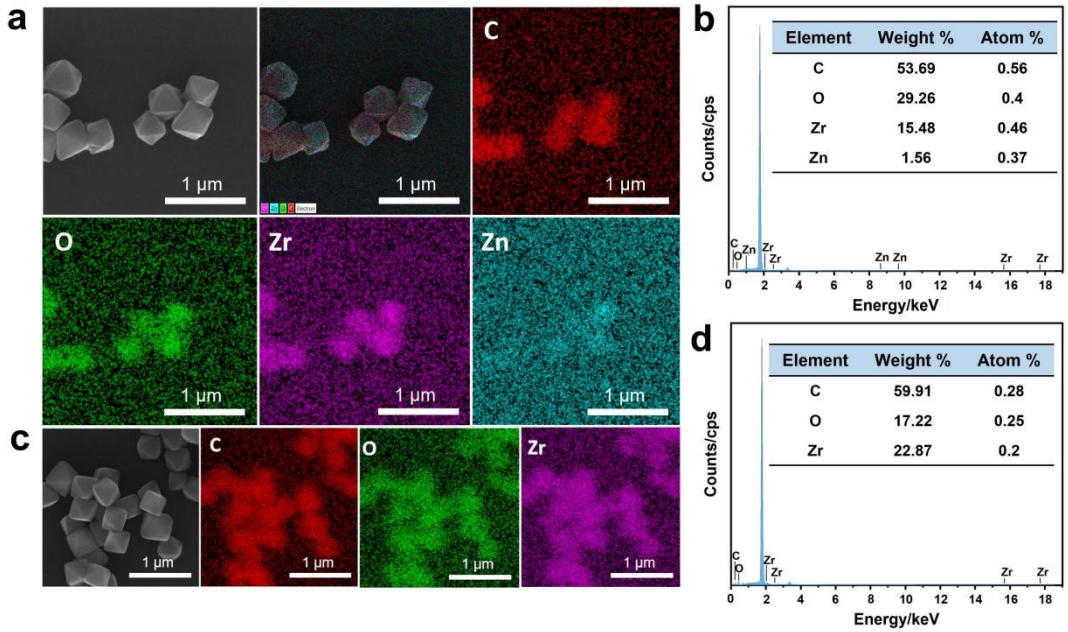

Fig. S2 Elemental mapping image of Eu@B-UiO-66/Zn (a) and B-UiO-66 (c); EDS spectra and the corresponding element distribution of Eu@B-UiO-66/Zn (b) and B-UiO-66 (d).

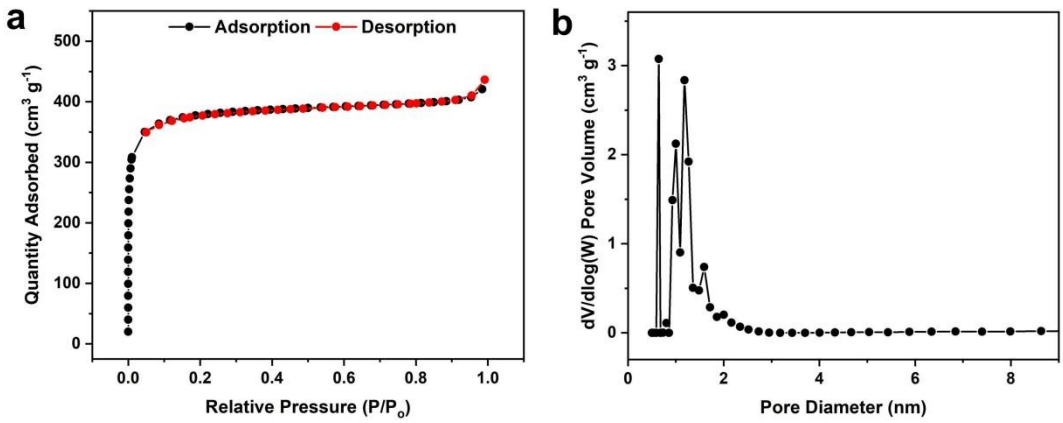

Fig. S3 (a) N_2 sorption isotherms and (b) pore-size distribution curves of B-UiO-66.

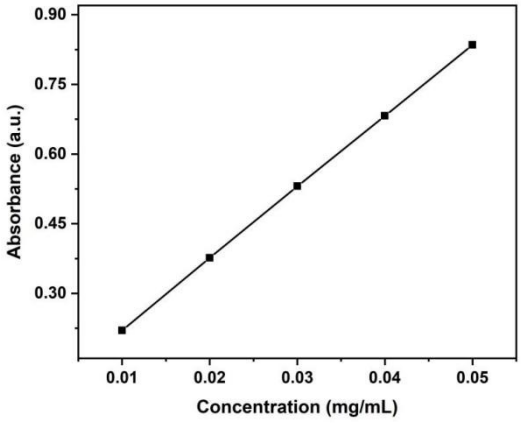

Fig. S4 Standard curve of eugenol.

Note: The standard curve equation of eugenol: Y=15.153x+0.076, R^2=0.9998

Where, Y is the absorbance at 280 nm, and x is the concentration at this time (mg mL^{-1}).

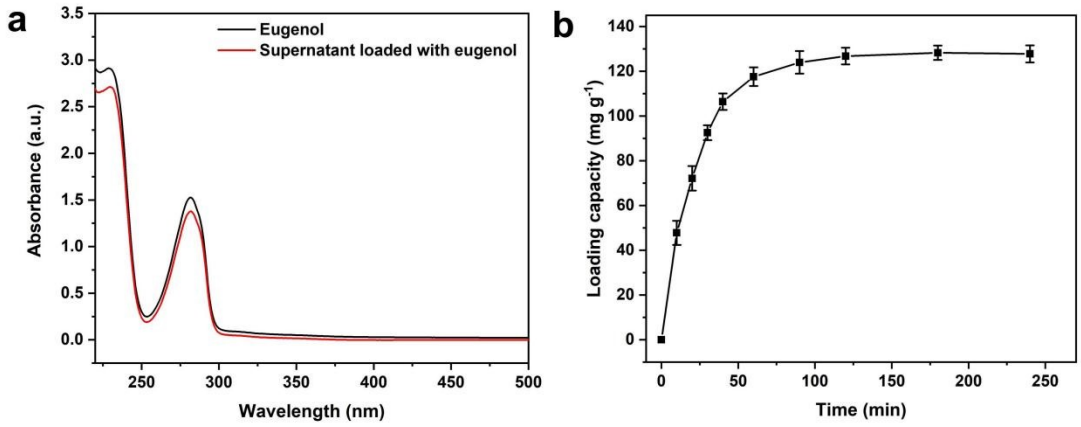

Fig. S5 UV–Vis absorption spectra of eugenol and supernatant loaded with eugenol, (b) Loading capacity of B-UiO-66 for eugenol.

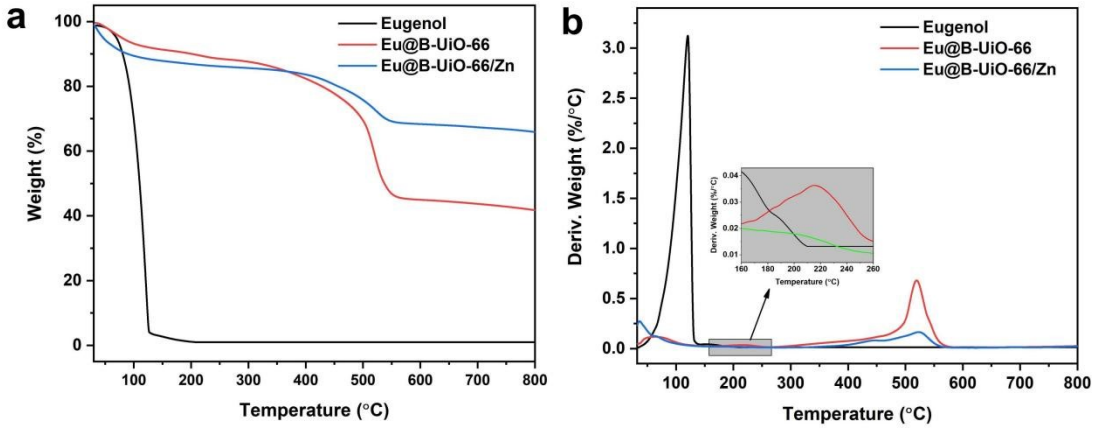

Fig. S6 (a) TGA and (b) DTG curves of eugenol (black), Eu@B-UiO-66 (red) and Eu@B-UiO-66/Zn (blue).

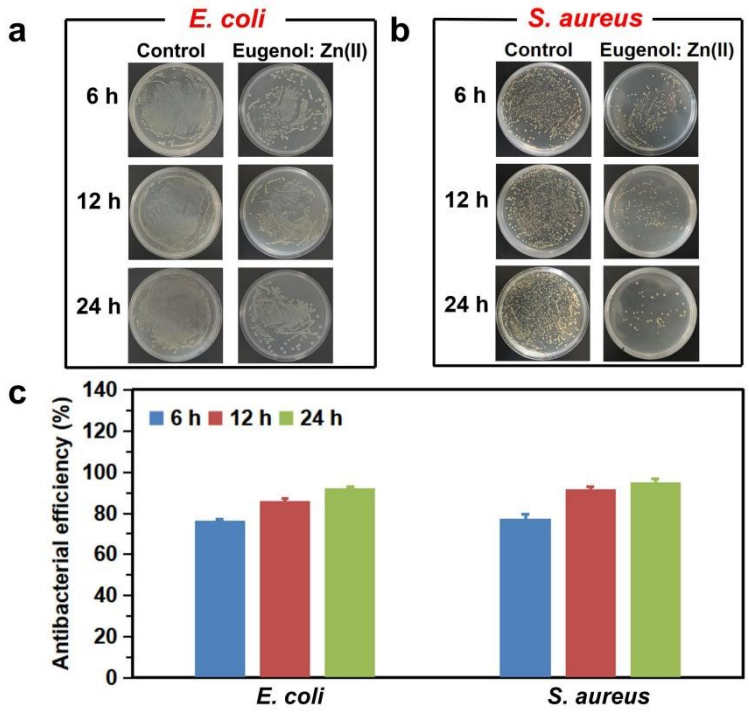

Fig. S7 Bacterial colony images of *E. coli* (a) and *S. aureus* (b) at pH 6.8 for 24 h; quantitative data (c) of *E. coli* and *S. aureus.*

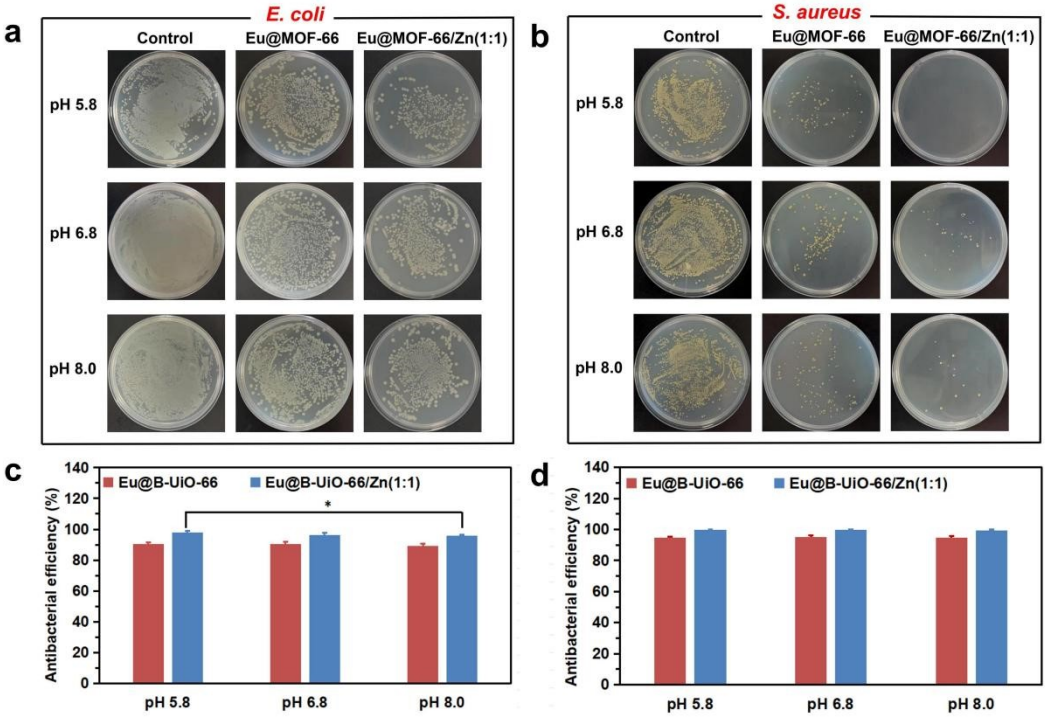

Fig. S8 Bacterial colony images and quantitative data of *E. coli* (a, c) and *S. aureus* (b, d) at different pH for 24 h (n = 3, mean ± SD, *p < 0.05).