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*Supplementary Information*

# A Conjugated Microporous Polymer/Wood Aerogel with Physical Adsorption, Chemical Degradation and Antibacterial Self-Cleaning Triple Sewage Treatment Functions

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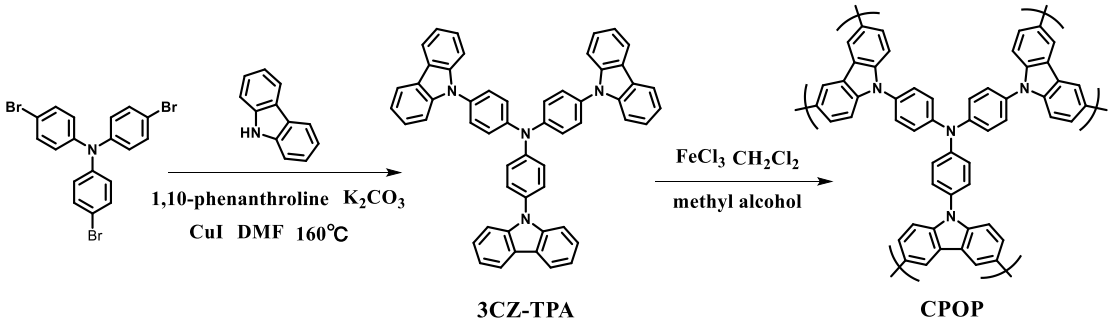


**Scheme S1.** Synthesis of 3CZ-TPA and CPOP.

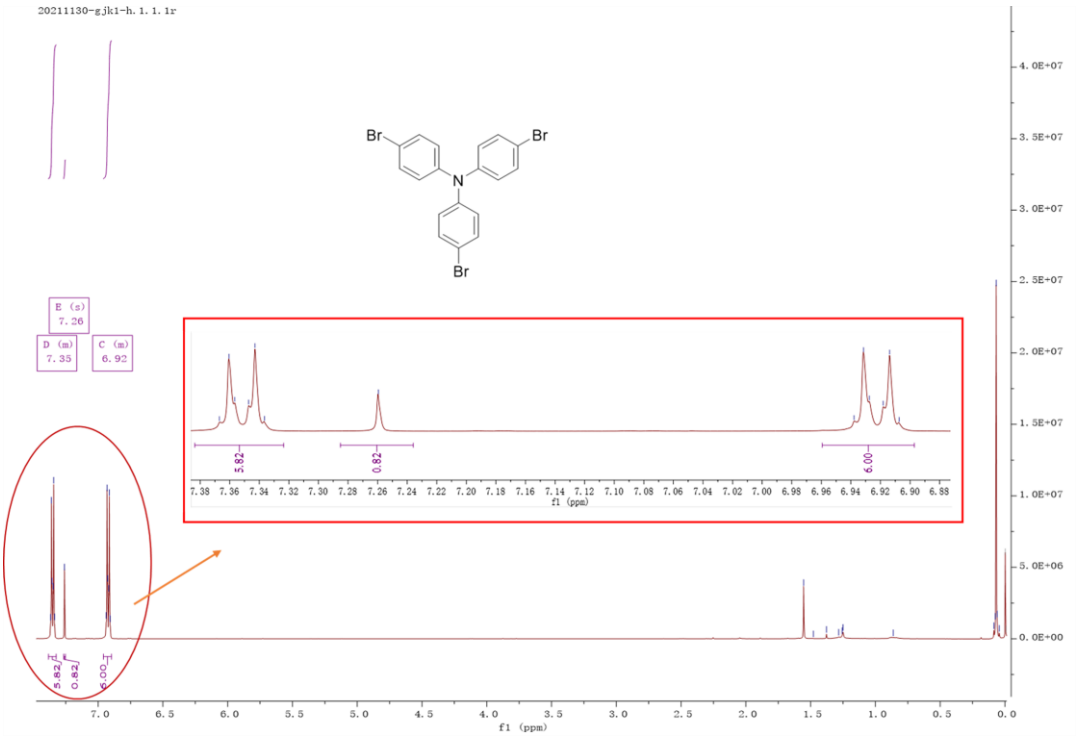


**Figure S1.** $^{1}$H NMR spectra of tris(4-bromophenyl)amine.

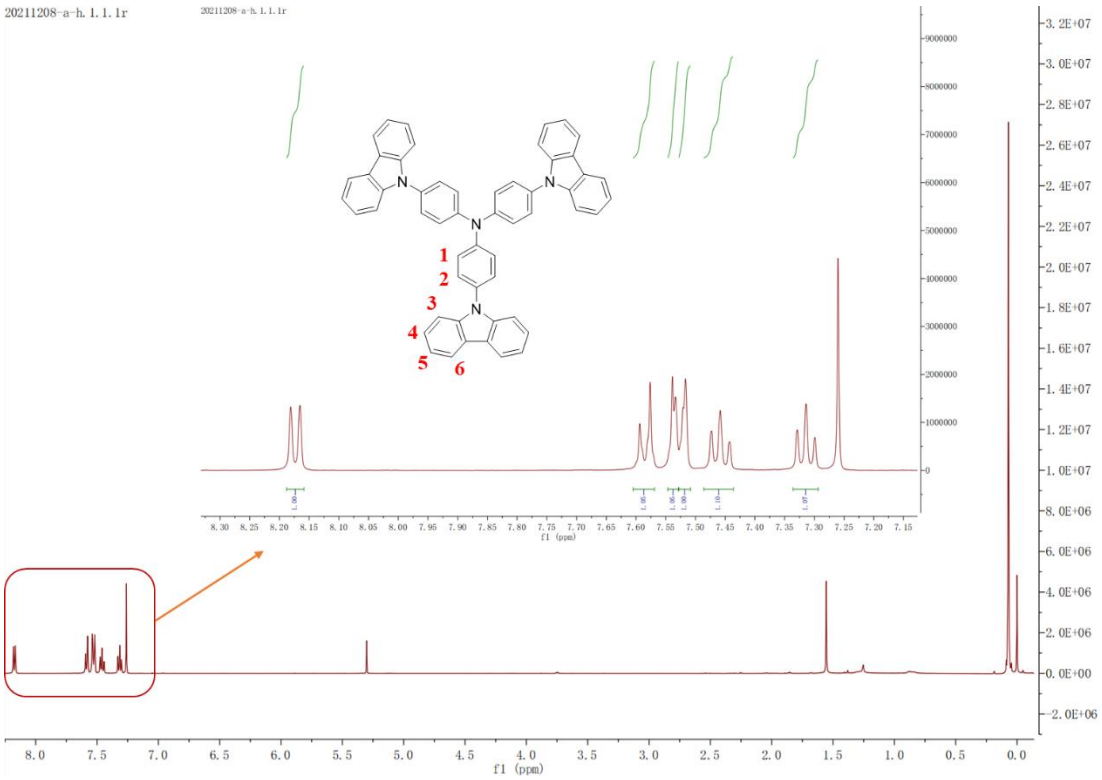


**Figure S2.** $^{1}$H NMR spectra of tris(4-carbazolylphenyl)amine.

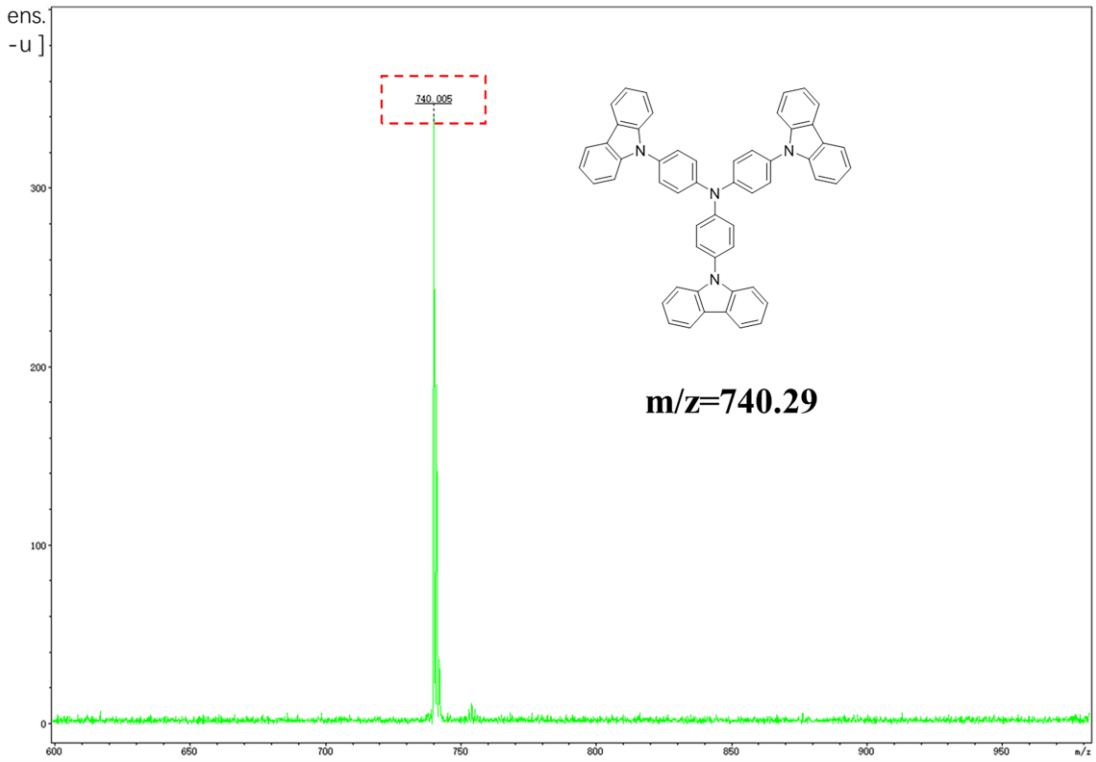


**Figure S3.** MALDI-TOF spectra of tris(4-carbazolylphenyl)amine.

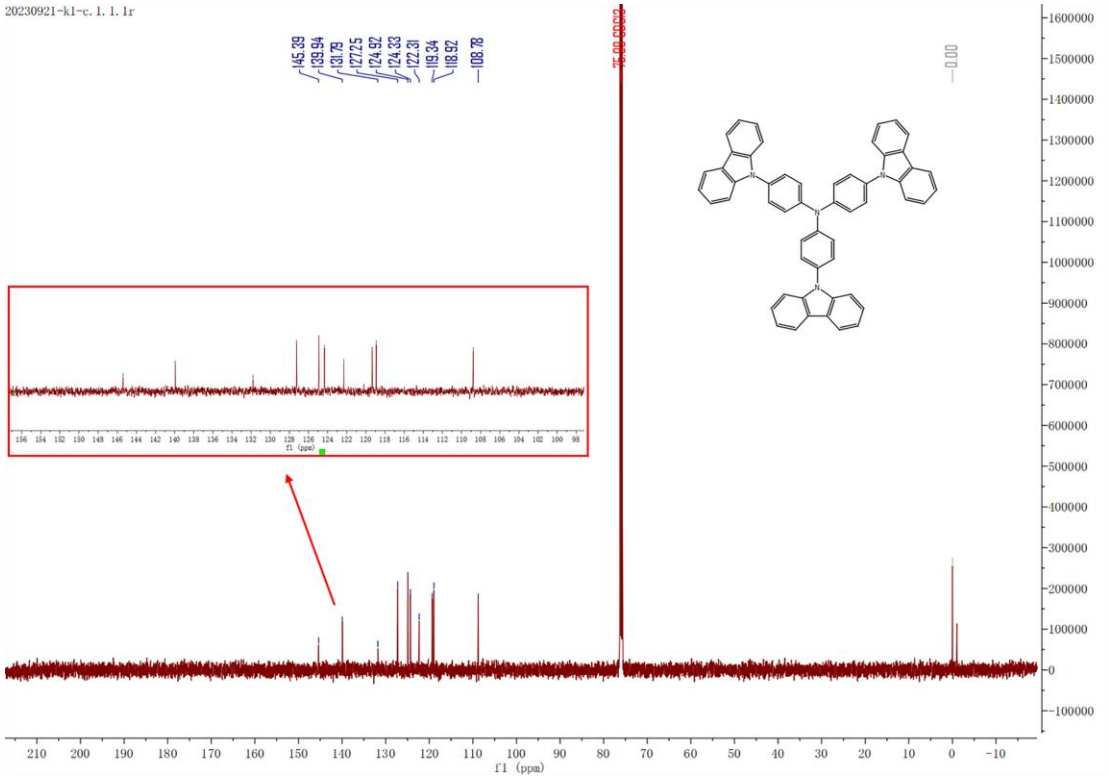


**Figure S4.** $^{13}$C NMR spectra of tris(4-carbazolylphenyl)amine.

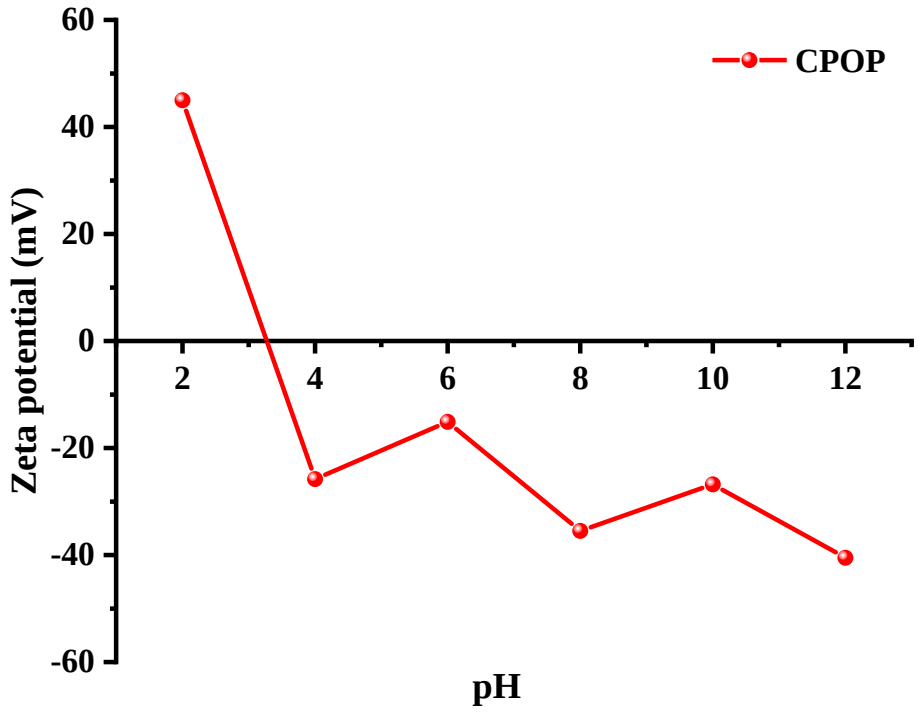


**Figure S5.** Zeta-potential of CPOP.

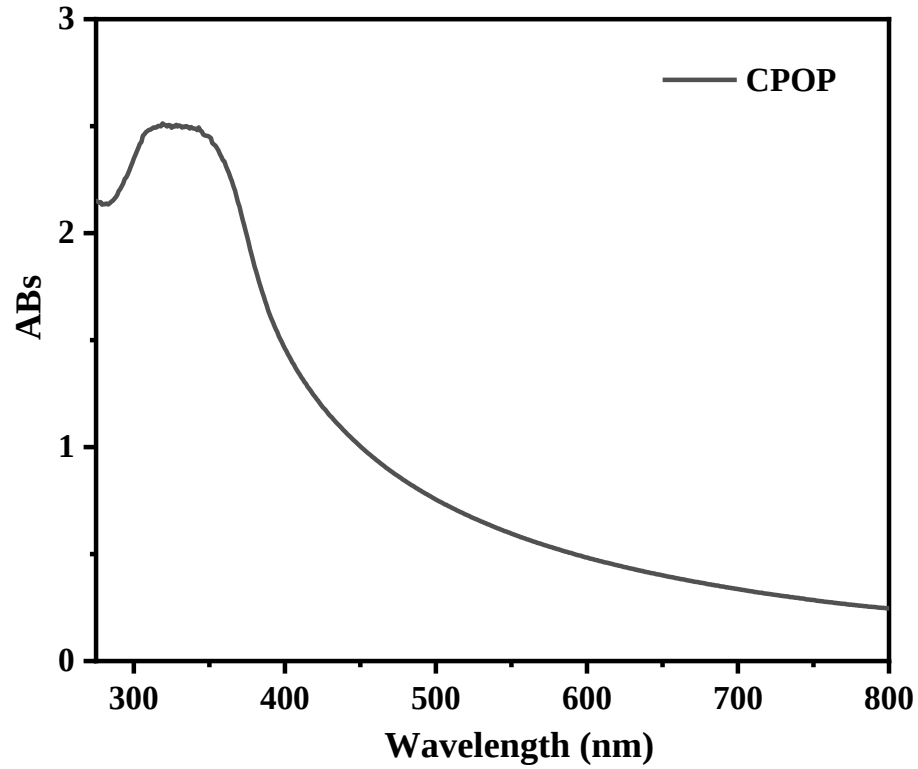


**Figure S6.** UV-vis spectra of CPOP.

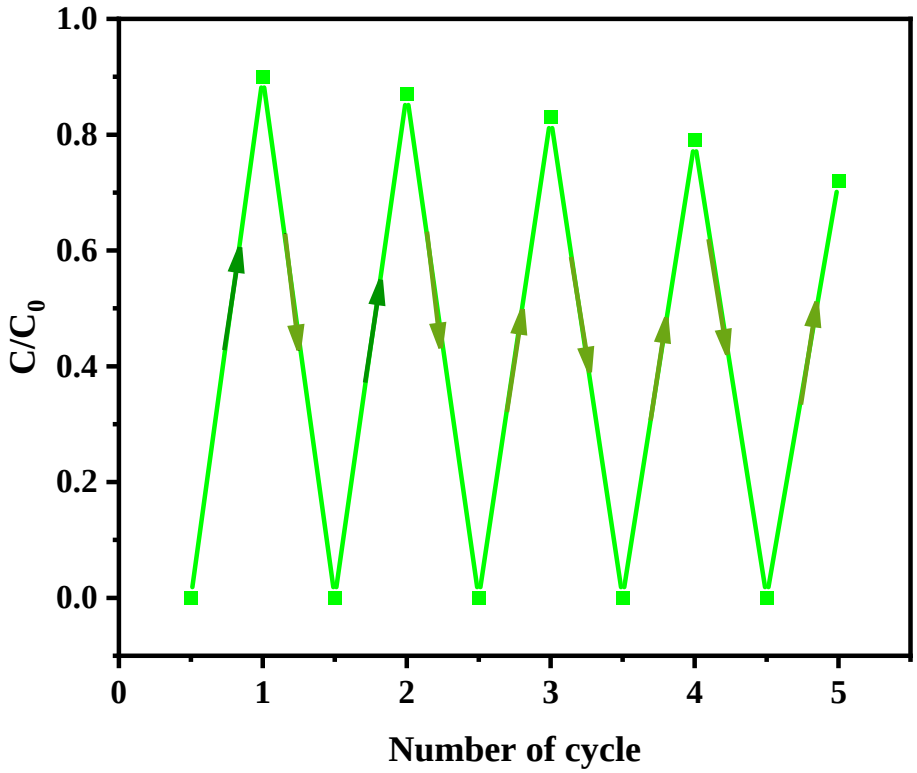


**Figure S7.** Cyclic stability of CPOP/wood aerogel.

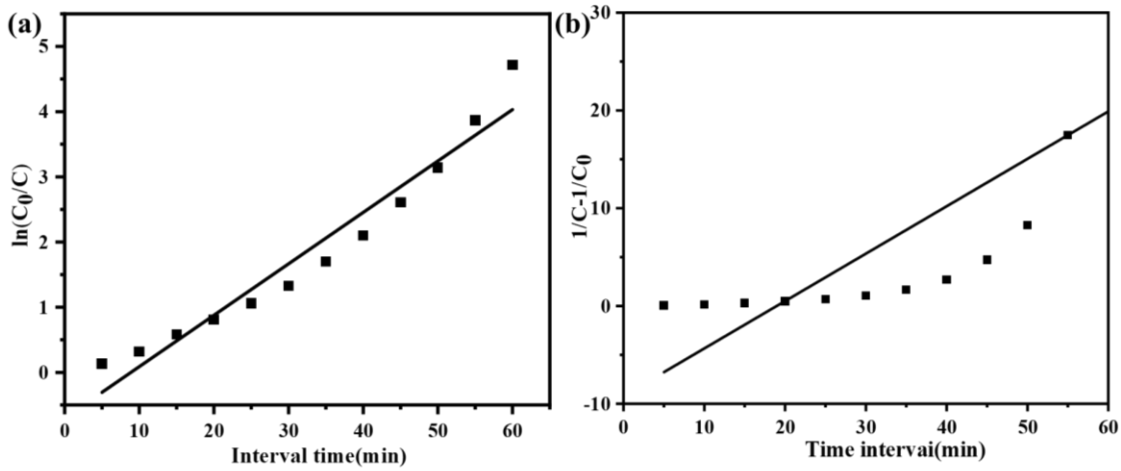


**Figure S8.** (a) Quasi-first-order dynamics of CPOP. (b) Quasi-second-order dynamics of CPOP.

**Table S1.** Comparison table of adsorption and photocatalytic performance between this work and other related works.

| Materials | Adsorption | Concentration of catalysts | Concentration of RhB | Degradation Rate (over 80%) | References |
|---|---|---|---|---|---|
| PTZCP (CMP) | 373 mg/g | 0.05 mg/mL | 10 mg/L | 60 min | [1] |
| $TiO_2$ | — | 1 mg/mL | 10 mg/L | 180 min | [2] |
| BBO-NiPor-CMP | — | 0.26 mg/mL | 25 mg/L | 80 min | [3] |
| CPOP | 530 mg/g | 0.04 mg/mL | 8 mg/L | 60 min | This work |

## References

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