

## Supporting Information

# Three novel coordination polymers as bifunctional materials for photocatalytic degradation of dyes and oxygen evolution reaction in alkaline solutions

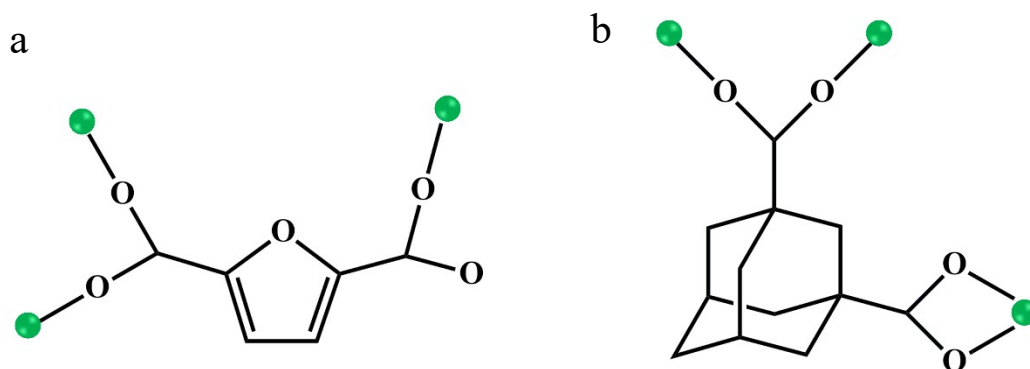
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**Fig. S1** **a** 2,5-fdca<sup>2-</sup> links metal atoms in  $\mu_3-(\eta^1:\eta^1:\eta^1)$  link mode; **b** 1,3-abc<sup>2-</sup> links metal atoms in  $\mu_3-(\eta^2:\eta^1:\eta^1)$ .

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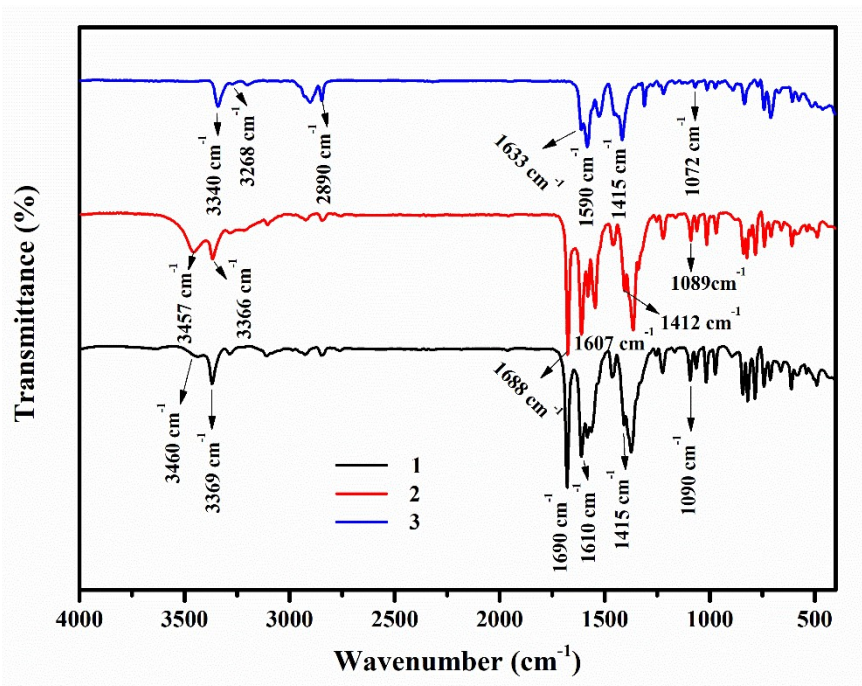


Fig. S2 Infrared spectrogram of CPs 1-3.

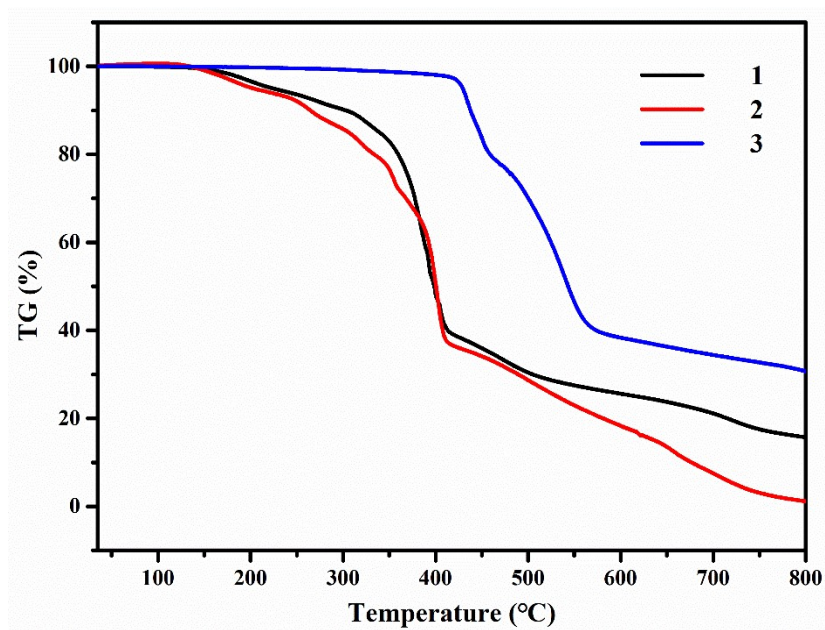


Fig. S3 Thermogravimetric curve of CPs 1-3.

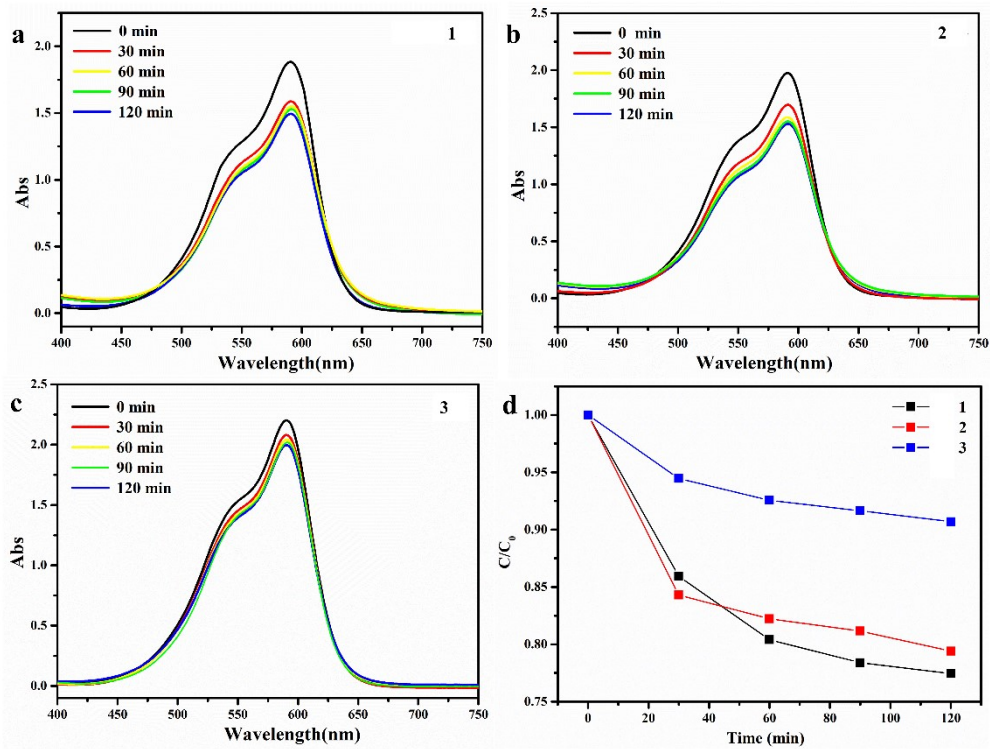


Fig. S4 a-c Dark reaction absorption curves; d dark adsorption rates of CV dyes in the presence of CPs 1-3.

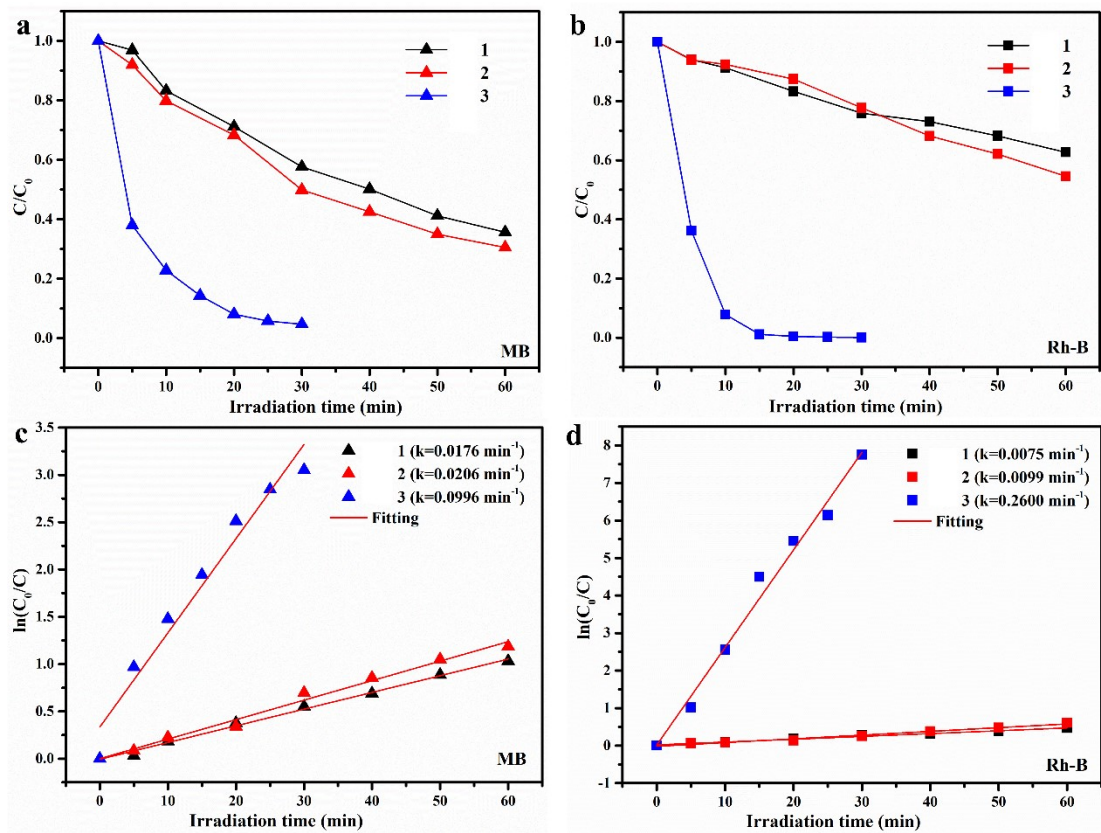


Fig. S5 a-b Degradation rates of MB and Rh-B dyes.

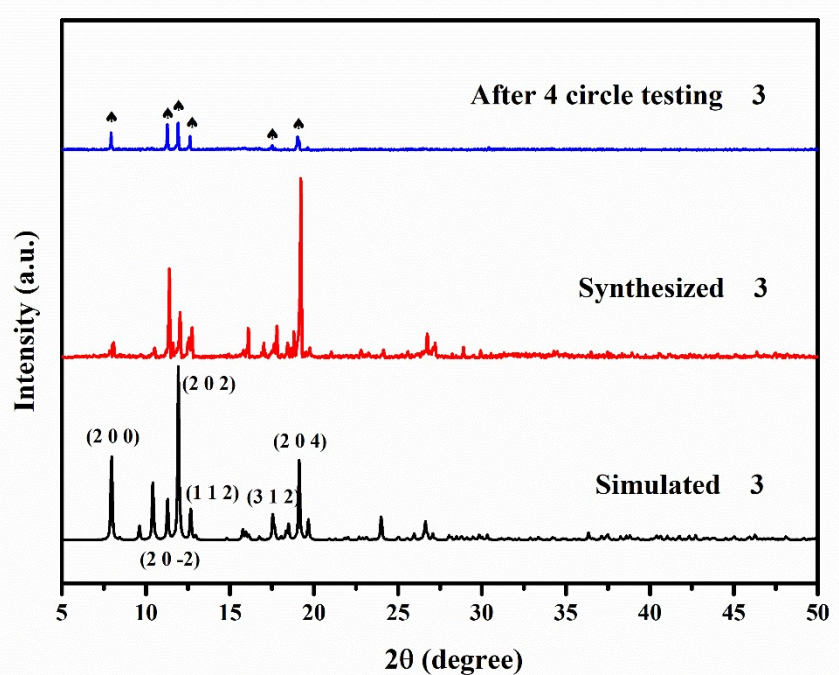


Fig. S6 PXR D patterns of complex 3 before and after the photocatalysis process.

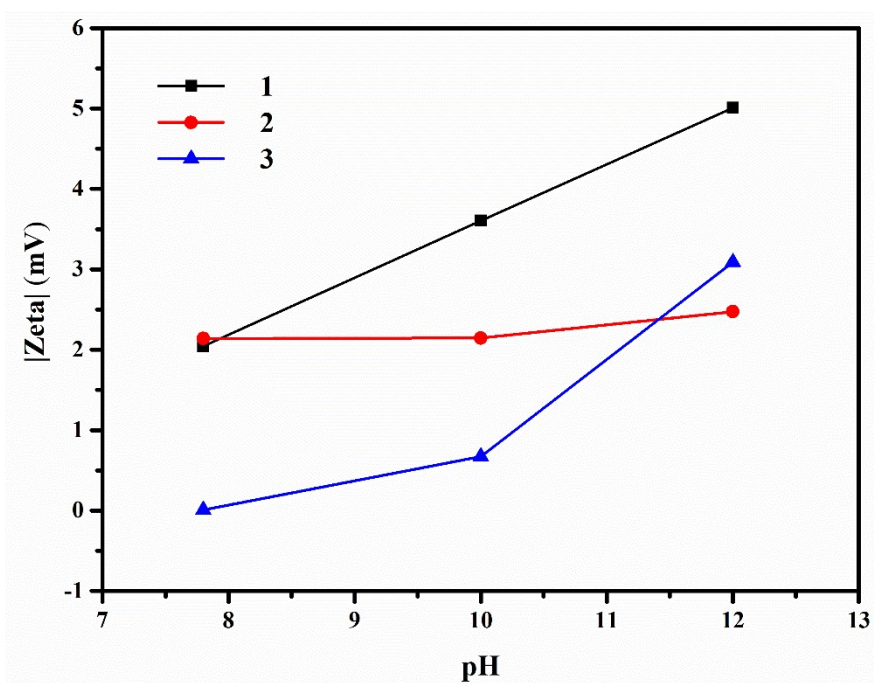
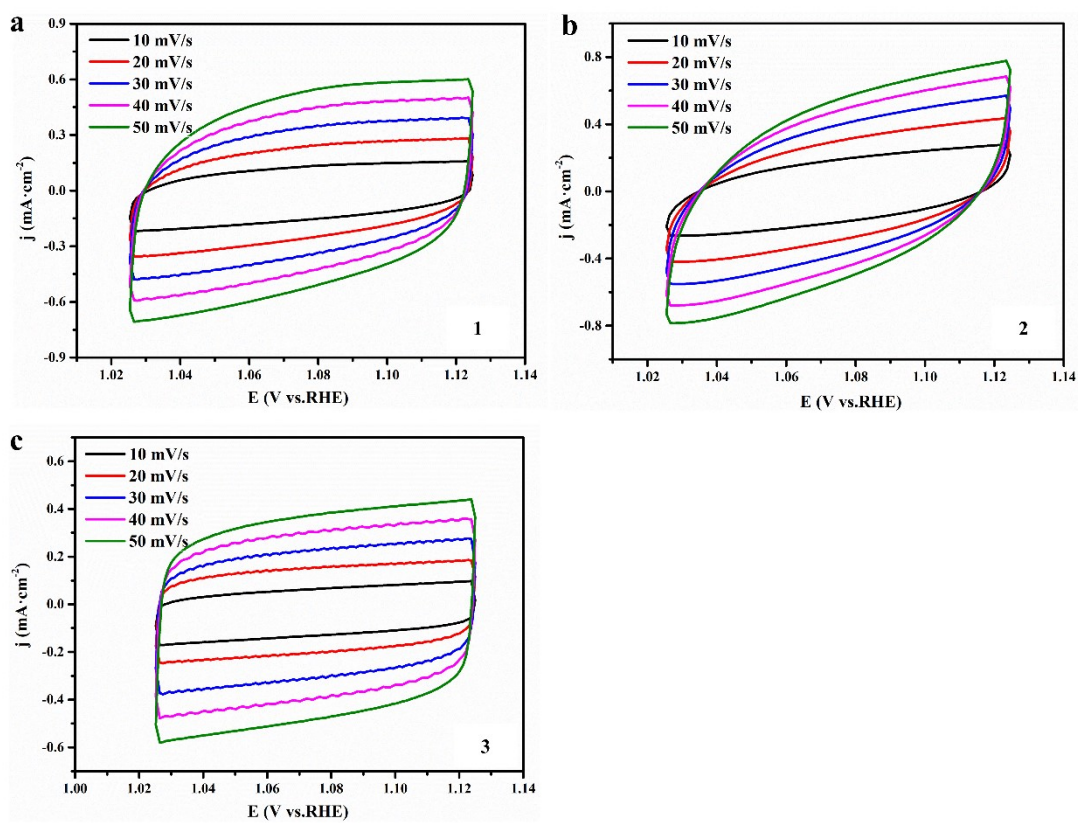


Fig. S7 Zeta potentials at different pH of CPs 1-3.



**Fig. S8** The cyclic voltammetry (CV) curves of CPs 1-3.