

## Electronic Supporting Information

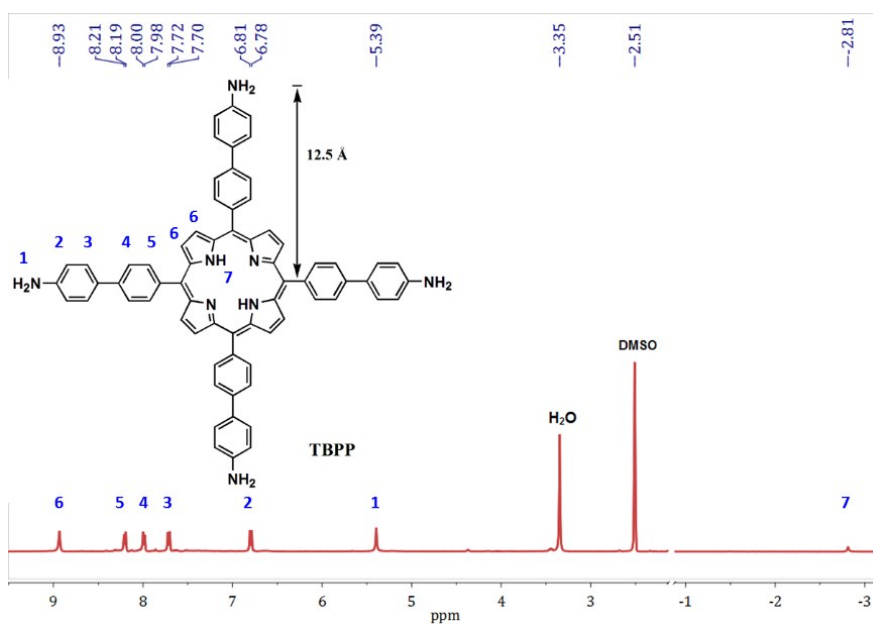
### **A metalloporphyrin-based porous organic polymer as efficient catalyst for the catalytic oxidation of olefins and arylalkanes**

*Zheng-Dong Ding,<sup>a</sup> Wei Zhu,<sup>a</sup> Tao Li,<sup>a</sup> Rui Shen,<sup>a</sup> Yunxing Li,<sup>a</sup> Zaijun Li,<sup>a</sup> Xuehong Ren,<sup>b</sup> and Zhi-Guo Gu<sup>\*a</sup>*

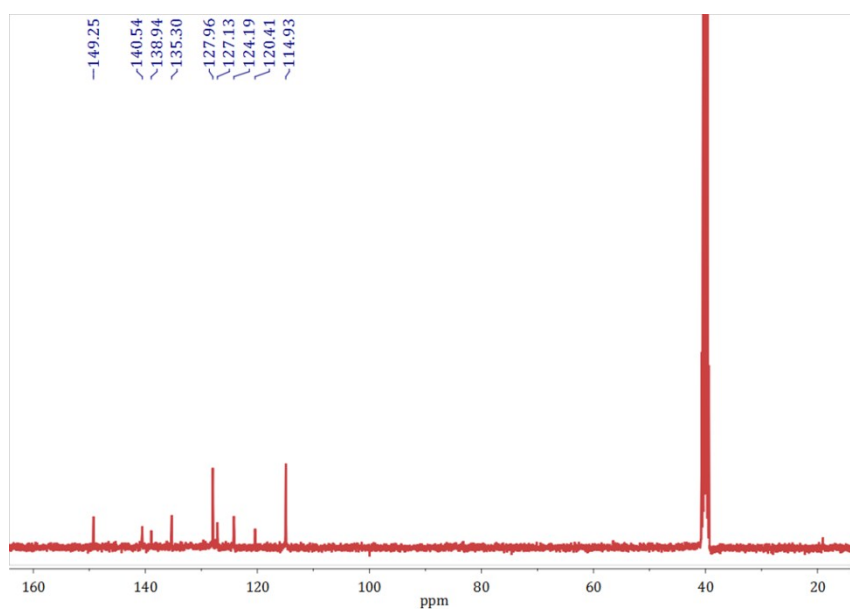
<sup>a</sup> *Key Laboratory of Synthetic and Biological Colloids, Ministry of Education, School of Chemical and Material Engineering, Jiangnan University, Wuxi 214122, China*

<sup>b</sup> *The Key Laboratory of Eco-textiles of Ministry of Education, College of Textiles and Clothing, Jiangnan University, Wuxi 214122, China*

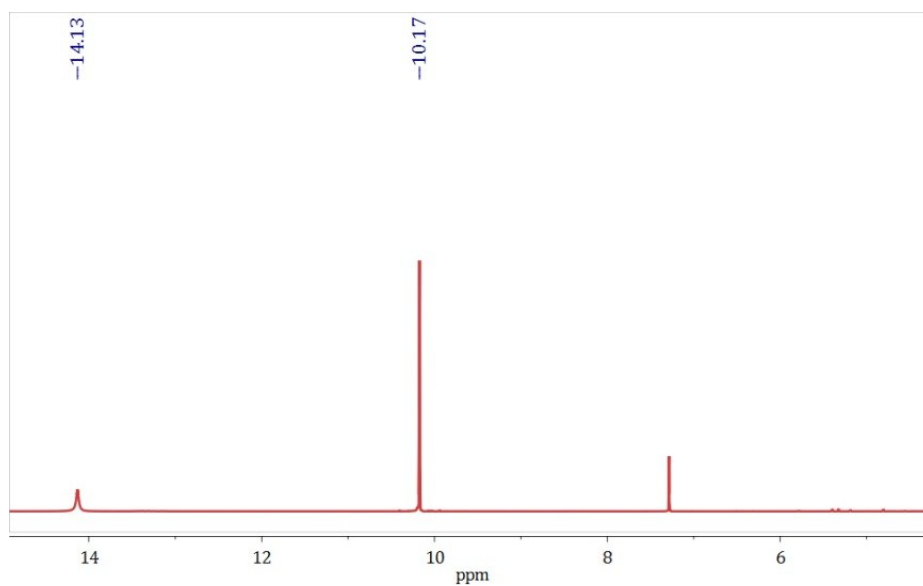
E-mail: [zhiguogu@jiangnan.edu.cn](mailto:zhiguogu@jiangnan.edu.cn)



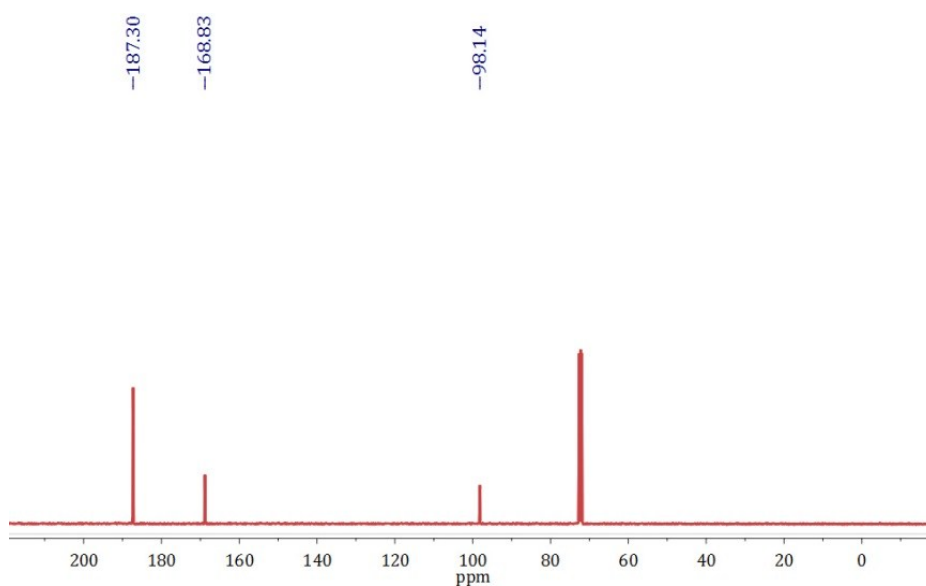
**Fig. S1** <sup>1</sup>H NMR of 5, 10, 15, 20-Tetrakis(4-aminobiphenyl)porphyrin (TBPP).



**Fig. S2** <sup>13</sup>C NMR of 5, 10, 15, 20-Tetrakis(4-aminobiphenyl)porphyrin (TBPP).



**Fig. S3**  $^1\text{H}$  NMR of 1, 3, 5-Triformylphloroglucinol (TP) in  $\text{CDCl}_3$ .



**Fig. S4**  $^{13}\text{C}$  NMR of 1, 3, 5-Triformyl phloroglucinol (TP) in  $\text{CDCl}_3$ . Aldehyde carbonyl ( $\text{C}=\text{O}$ ) carbon resonate at =187.3ppm.

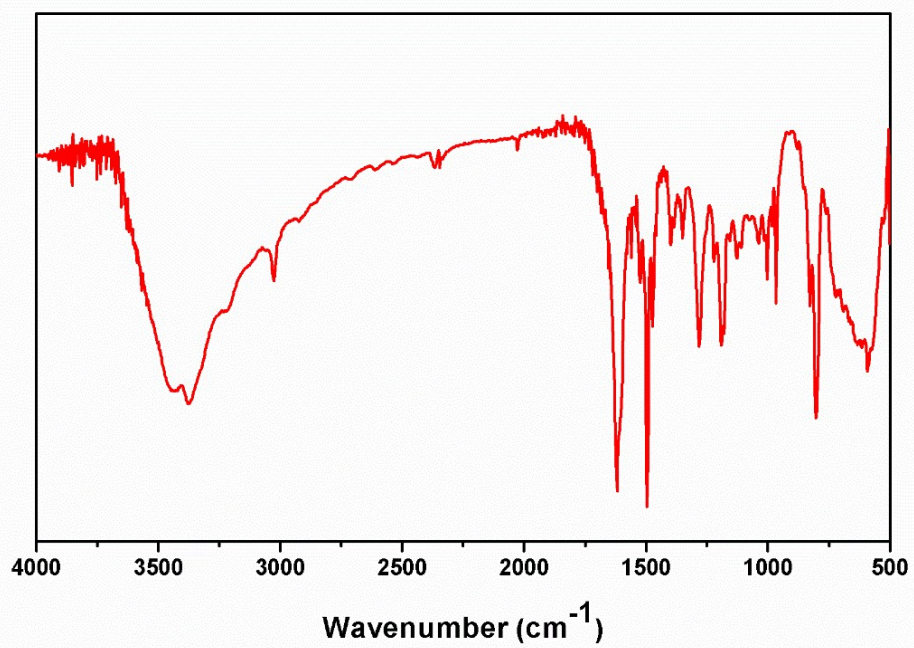


Fig. S5 FI-IR spectra of TBPP.

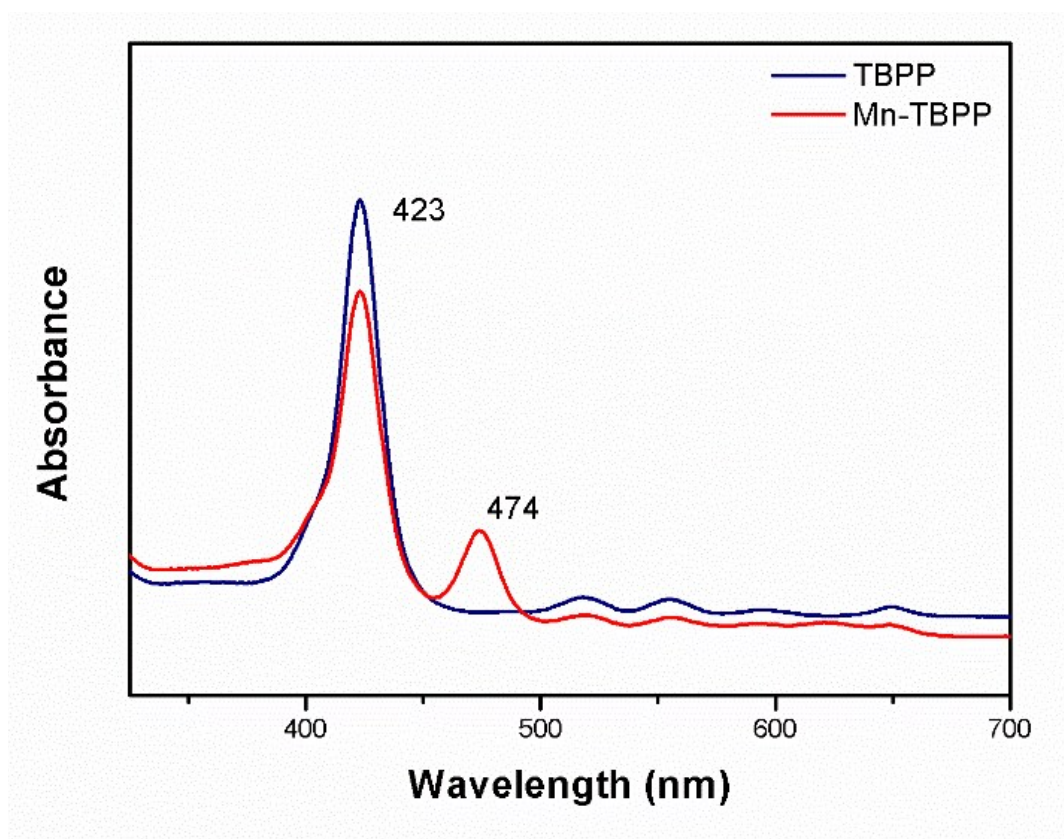


Fig. S6 UV-Vis spectra of TBPP and Mn-TBPP in the solution of DMF.

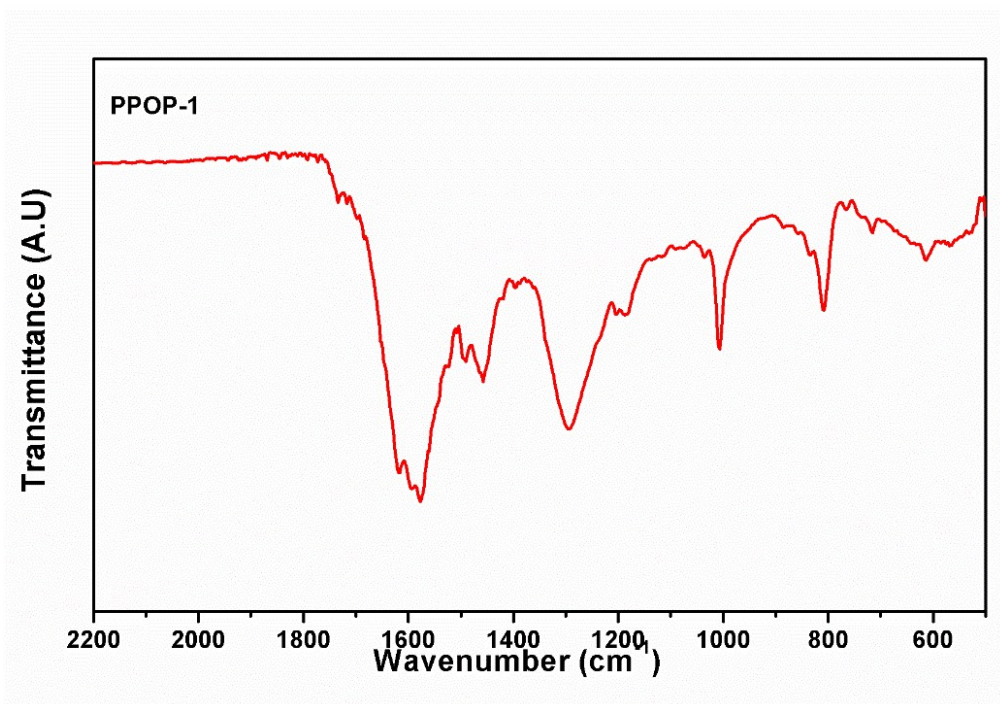


Fig. S7 FI-IR spectra of PPOP-1.

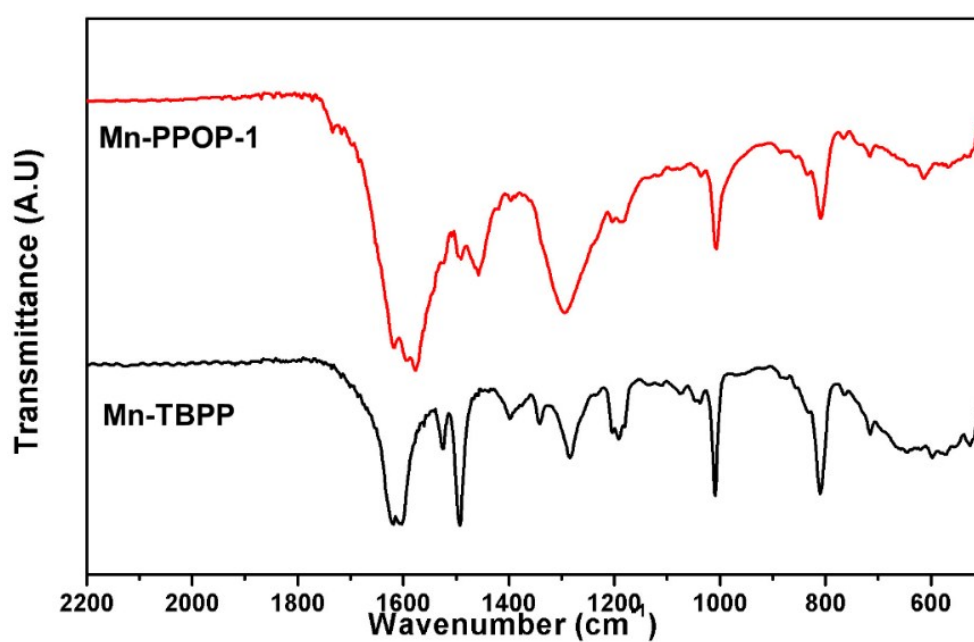


Fig. S8 FI-IR spectra of Mn-TBPP and Mn-PPOP-1.

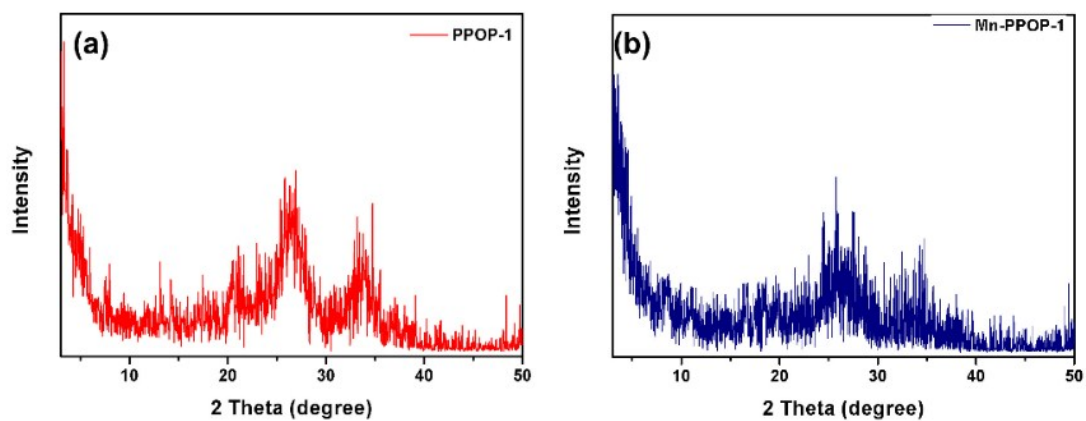


Fig. S9 XRD patterns of (a) PPOP-1 and (b) Mn-PPOP-1.

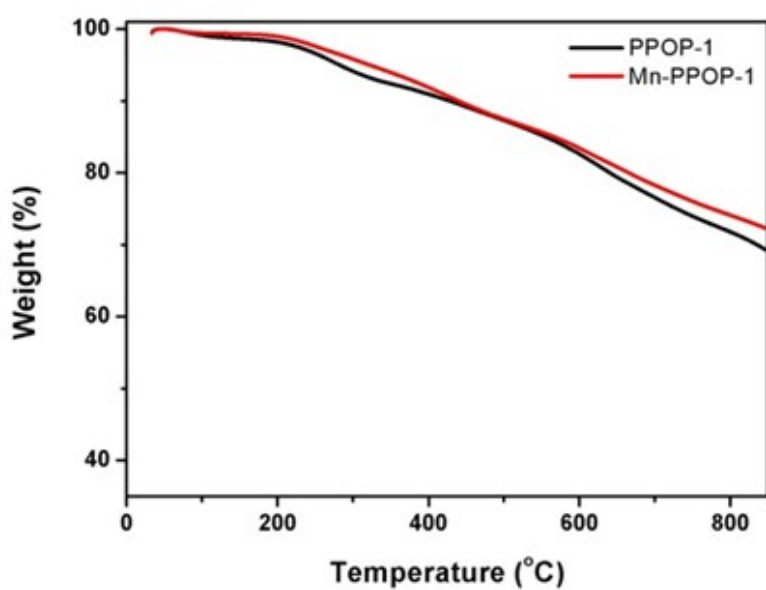


Fig.S10 TGA data of PPOP-1 and Mn-PPOP-1 under N<sub>2</sub> atmosphere.

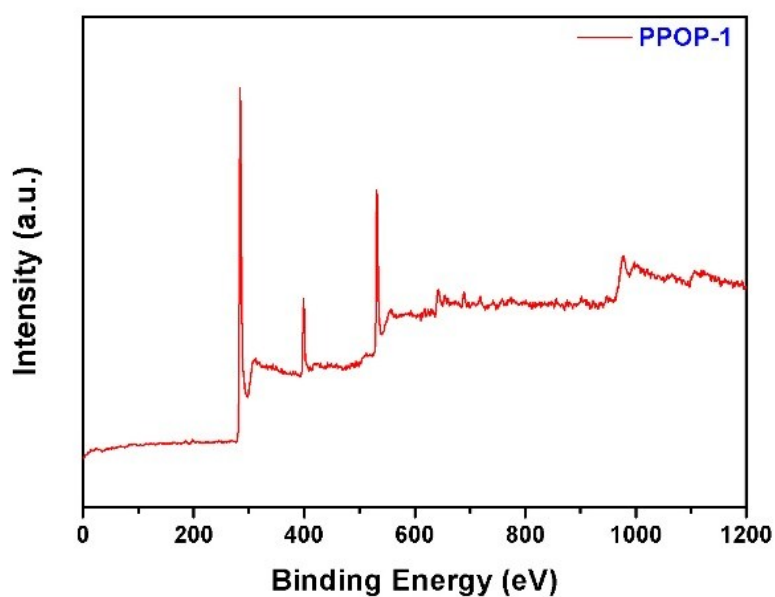
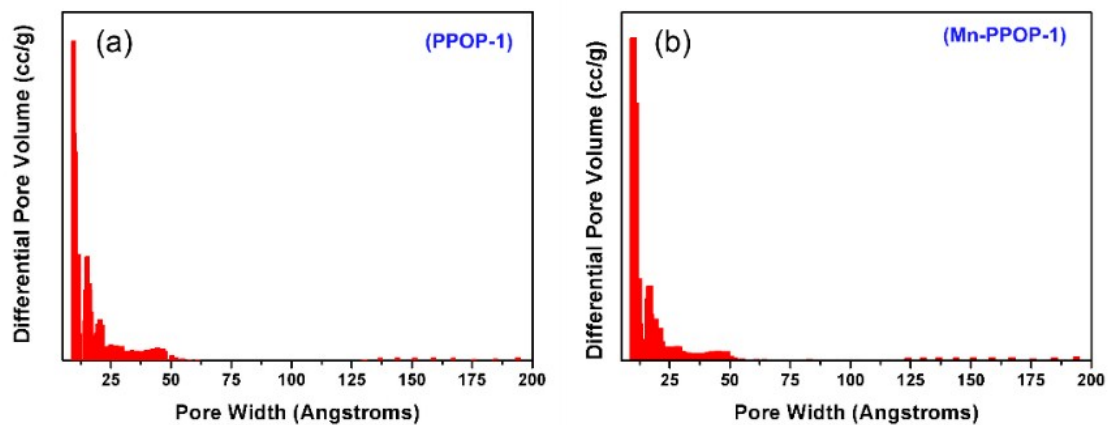
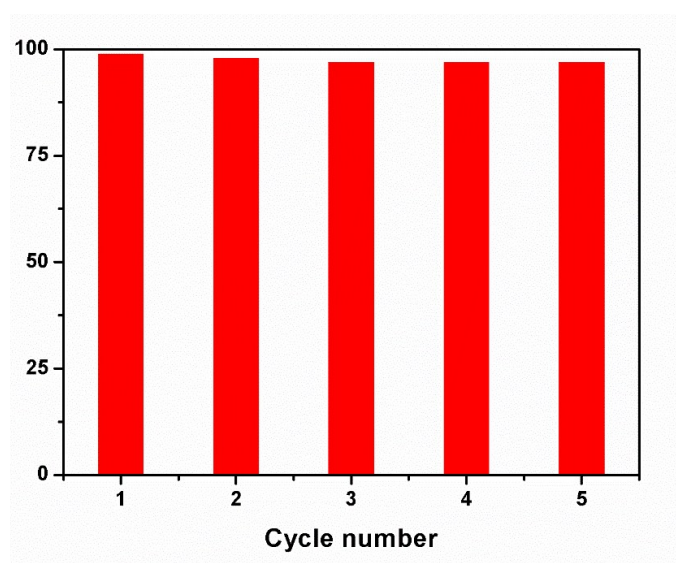


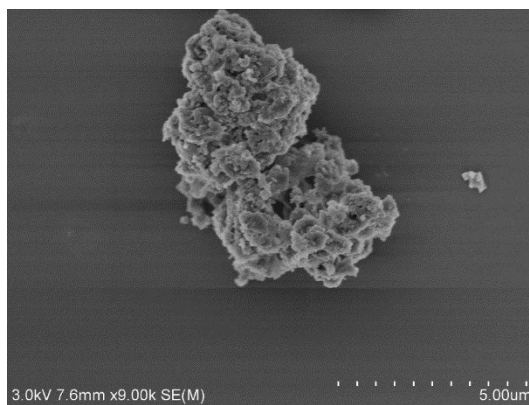
Fig. S11 XPS survey spectra of PPOP-1.



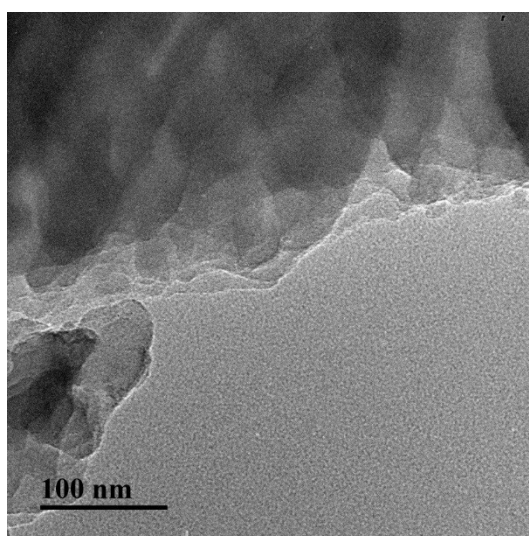
**Fig. S12** Pore size distribution of (a) PPOP-1, and (b) Mn-PPOP-1.



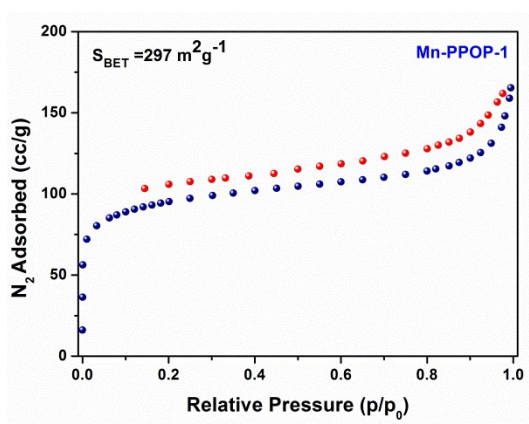
**Fig. S13** Yield of catalytic cycles for the epoxidation of styrene by Mn-PPOP-1.



**Fig. S14** SEM images of Mn-PPOP- 1 after 5<sup>th</sup> cycle.

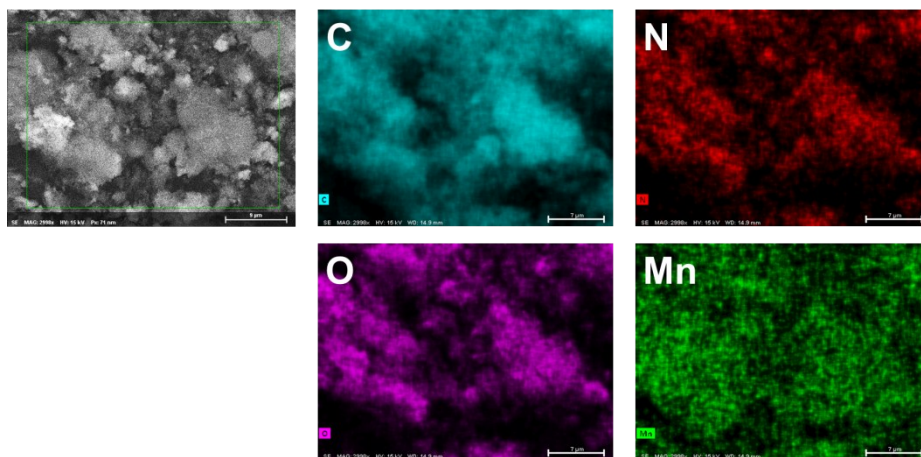


**Fig. S15** TEM images of Mn-PPOP- 1 after 5<sup>th</sup> cycle.



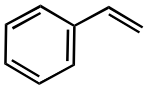
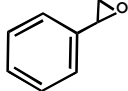
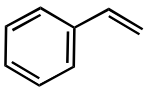
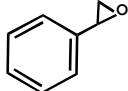
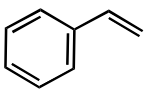
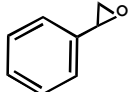
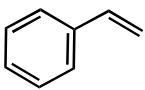
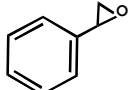
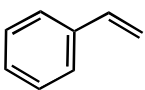
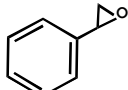
**Fig. S16** N<sub>2</sub> adsorption/desorption isotherms of Mn-PPOP- 1 after 5<sup>th</sup> cycle.





**Fig. S17** EDS mapping of Mn-PPOP-1.

**Table S1** Selective epoxidation of olefins catalyzed by various catalysts<sup>a</sup>

Entry	Substrate	Product	Catalyst	Yield (%) <sup>b</sup>
1			Mn-TBPP	76
2			Mn-TBPP	29 <sup>c</sup>
3			MnCl <sub>2</sub>	21
4			PPOP-1	Trace
5			Blank	Trace

<sup>a</sup>Catalyst (0.005 mmol) , Olefins (0.1 mmol) and PhIO (0.15 mmol) in 1ml CH<sub>3</sub>CN were stirred at room temperature for 12 h.; <sup>b</sup> Yield [%] was determined by GC-MS using an SE-54 column.; <sup>c</sup> The third cycle;