

Surfactant-Assisted Mesopores in Hierarchical Metal-Organic Frameworks for Immobilization of model protein Cyt c

Xiaodong Feng,^a Lihui Liu,^a Yeming Wang,^a Chaoqun Zhang,^a Gang Liu,^{a} Yuyang Tian^{b*} and*

Guangshan Zhu^b

^aResearch Institute of Chemical and Industrial Bioengineering, Jilin Engineering Normal University, Changchun 130000, China.

^bKey Laboratory of Polyoxometalate Science of the Ministry of Education, Faculty of Chemistry, Northeast Normal University, Changchun 130000, China.

E-mail for correspondence: lg2010919@163.com, tianyy100@nenu.edu.cn

Table of Contents

1. N ₂ sorption isotherm and micropore diameter distributions.	3
2. Calibration curves of Cyt c	3
3. The UV-vis spectra of Cyt c supernatants after loading	4
4. Double reciprocal plots of H ₂ O ₂ concentrations with activities for free Cyt c and Cyt c @H-mMOF-1	4
5. Recycling catalytic relative activity of Cyt c@H-mMOF-1.....	5
6. Loading capacity of H-mMOF-1-H1, H2 and H3 for Cyt c.....	5
7. Kinetic Parameters of free Cyt c and Cyt c @H-mMOF-1	5

1. N₂ sorption isotherm and micropore diameter distributions.

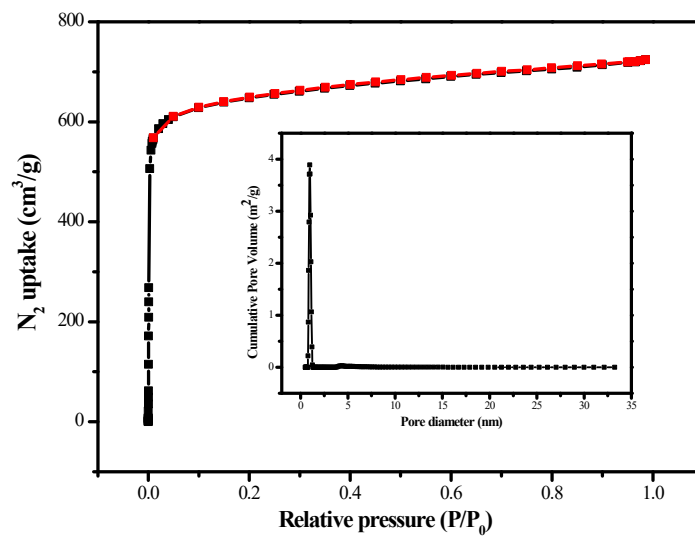


Fig. S1 N₂ sorption isotherm of medi-MOF-1 and micropore diameter distributions.

2. Calibration curves of Cyt c

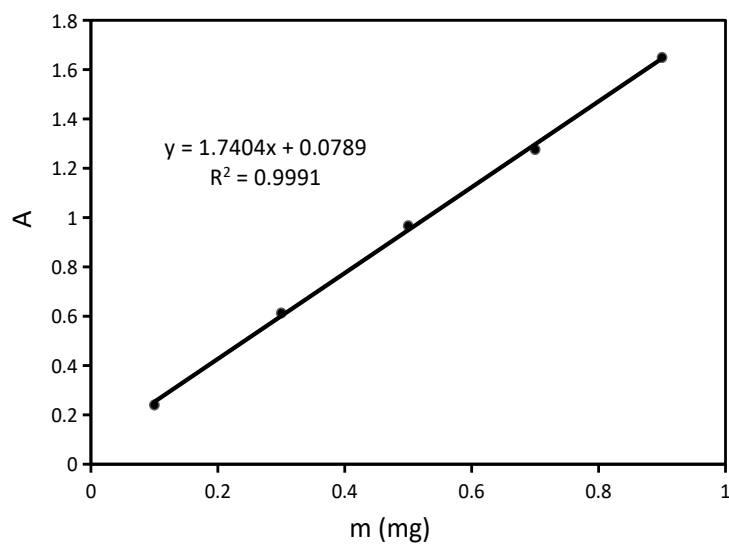


Fig. S2 Calibration curves of Cyt c.

3. The UV-vis spectra of Cyt c supernatants after loading

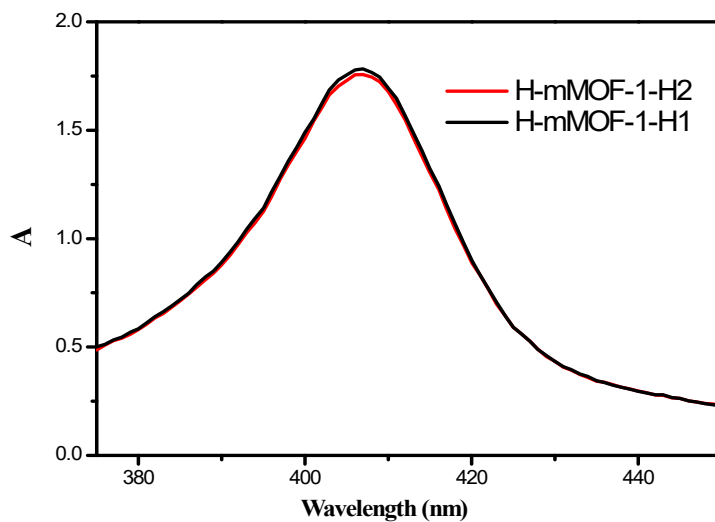


Fig. S3 UV-vis spectra of Cyt c supernatants after loading.

4. Double reciprocal plots of H₂O₂ concentrations with activities for free Cyt c and Cyt c @H-mMOF-1

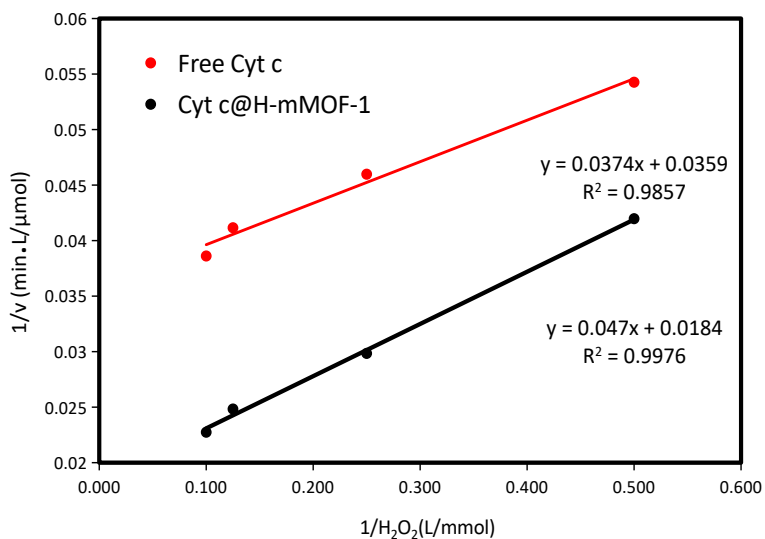


Fig. S4 Double reciprocal plots of H₂O₂ concentrations with activities for free Cyt c and Cyt c @H-mMOF-1.

5. Recycling catalytic relative activity of Cyt c@H-mMOF-1.

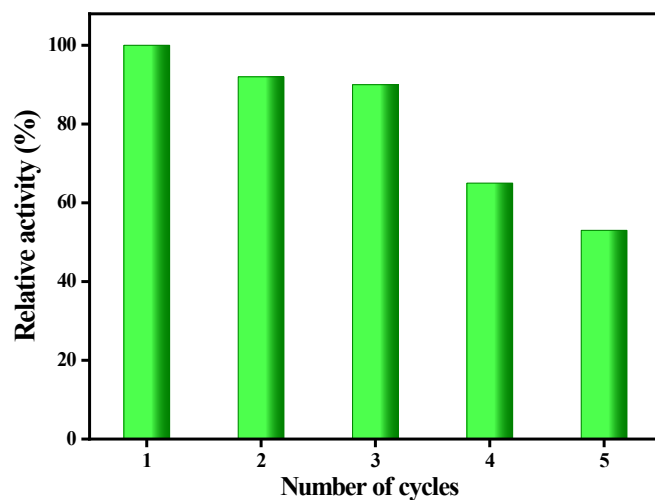


Fig. S5 Recycling catalytic relative activity of Cyt c@H-mMOF-1.

6. Loading capacity of H-mMOF-1-H1, H2 and H3 for Cyt c

Table S1 Loading capacity of H-mMOF-1-H1, H2 and H3 for Cyt c

Samples	Mesopore size (nm)	loading capacity (mg/g)
H1	2.5, 3.6	36.15
H2	3.7, 5.0	42.34
H3	3.9, 5.0, 8.9	160.65

7. Kinetic Parameters of free Cyt c and Cyt c @H-mMOF-1

Table S2 Kinetic Parameters of free Cyt c and Cyt c @H-mMOF-1.

Samples	K_m (mmol/L)	V_{max} ($\mu\text{mol}/(\text{L} \cdot \text{min})$)
Free Cyt c	0.96	27.86
Cyt c @H-mMOF-1	0.39	54.35