Supporting information

Facile synthesis of cyclodextrin-metal organic framework decorated with Ketjen Black and platinum nanoparticles and its application for the electrochemical detection of ofloxacin

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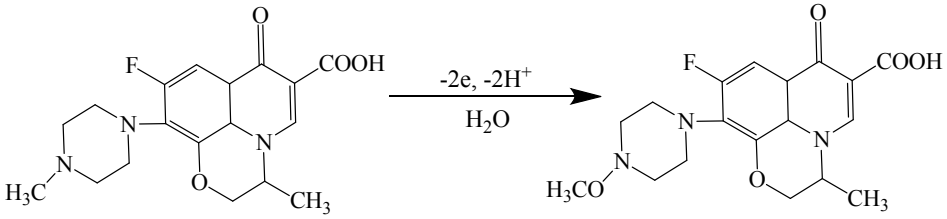

Fig. S1. The electrochemical oxidation mechanisms of ofloxacin.

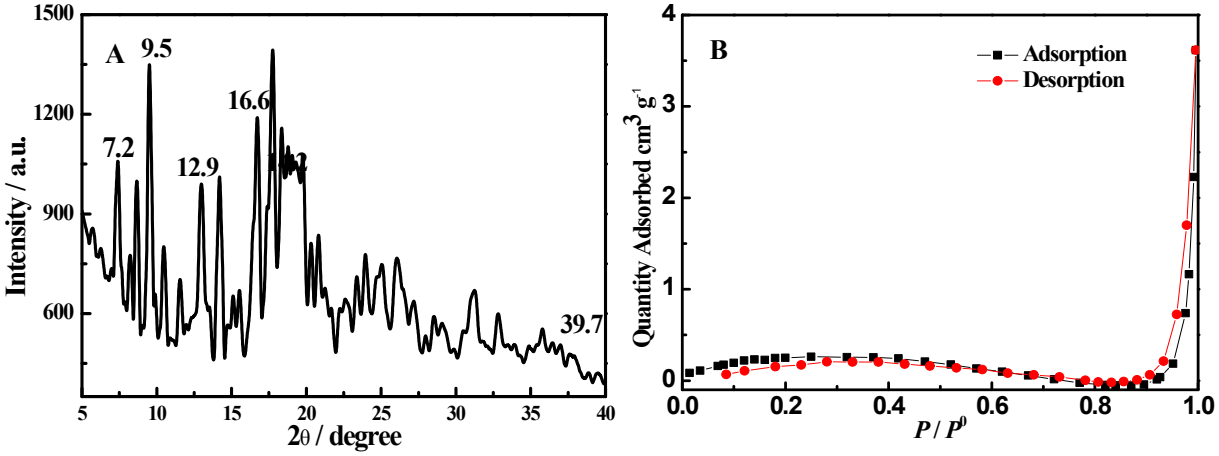

Fig. S2. (A) The XRD pattern of PtNPs/KB/CD-MOFs. (B) N_2 adsorption-desorption isotherms of PtNPs/KB/CD-MOFs.

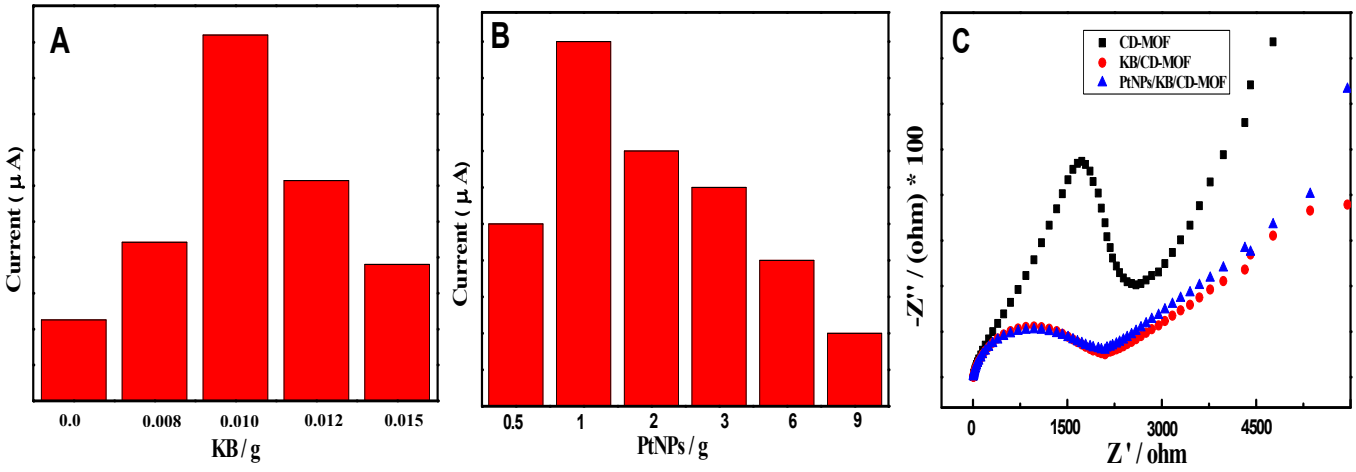

Fig. S3. (A) The influence of (A) KB, (B) PtNPs content on the electrochemical responses for ofloxacin at the PtNPs/KB/CD-MOFs (other experimental conditions refer the Experimental section). (C) Nyquist plot of CD-MOFs, KB/CD-MOFs and PtNPs/KB/CD-MOFs in PBS solution (pH = 7.4).

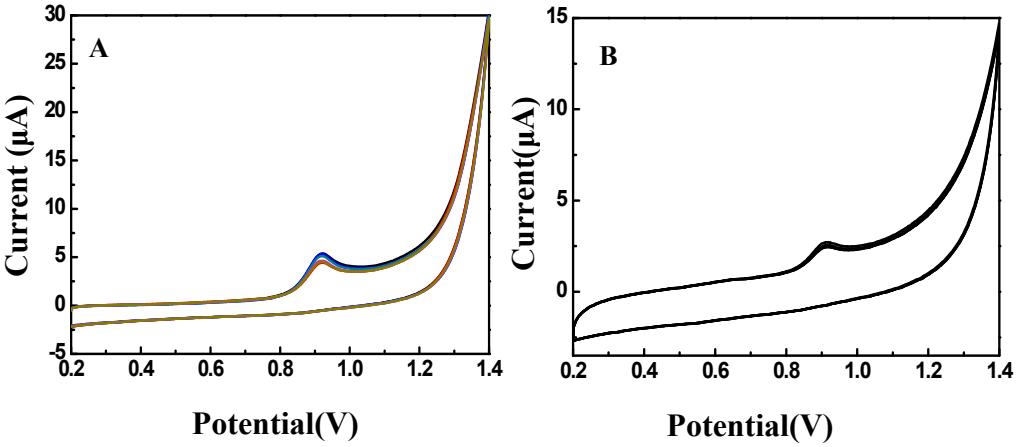

Fig. S4. CV responses of (A) six PtNPs/KB/CD-MOFs/GCE were prepared under the same conditions, (B) the PtNPs/KB/CD-MOFs/GCE was repeated at six times.

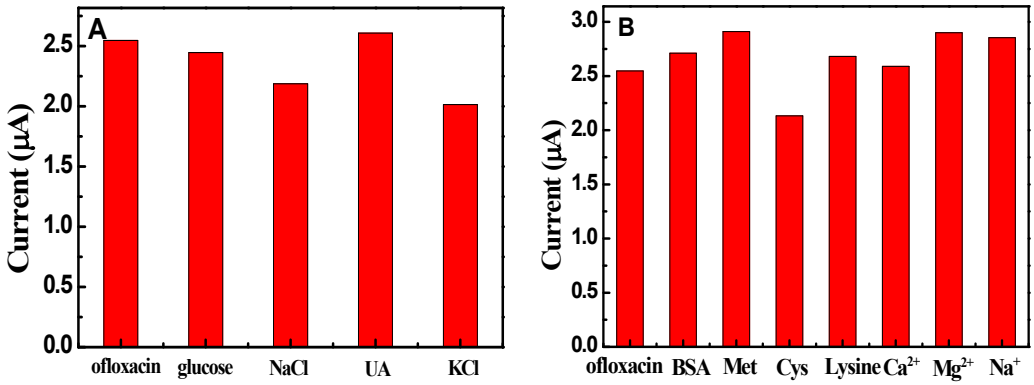

Fig. S5. Selectivity of the PtNPs/KB/CD-MOFs for ofloxacin over other interfering substances in PBS solutions (pH=7.4), 5 μM ofloxacin, 500 μM glucose, NaCl, UA, and KCl, 10 g L^{-1} BSA, 1 mg mL^{-1} Met, Cys and Lysine, 3 mM Ca^{2+}, Mg^{2+} and Na^{+}.

Table S1. Comparison of the PtNPs/KB/CD-MOFs/GCE with other ofloxacin sensors.

Sensors	Detection limit (μM)	Linear range (μM)	Ref.
Bi_2S_3/Bi_2WO_6	0.906	1 - 100	1
ZnO/GR[a]/GCE[b]	0.33	1 - 100	2
rGO[c]/Pt-Au/GCE	0.05	10 - 100	3
Cu_2O/NG[d]/Nafion/GCE	0.34	0.5 - 280	4
PtNPs/KB/CD-MOFs/GCE	0.037	0.08 - 100	This work

[a] Graphene;
[b] Glassy carbon electrode;
[c] Graphene oxide;
[d] Nitrogen-doped grapheme.

References

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