Electronic Supplementary Information (ESI)

for

Encapsulating ruthenium(II) complex into metal organic frameworks to engender high sensitivity for dopamine electrochemiluminescence detection

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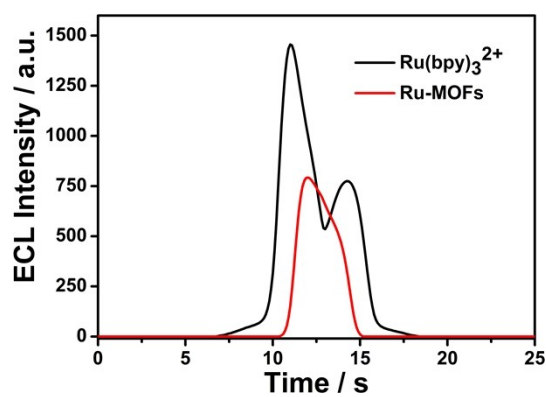*[b] College of Pharmaceutical Science, Southwest University, Chongqing 400716, P. R. China.*

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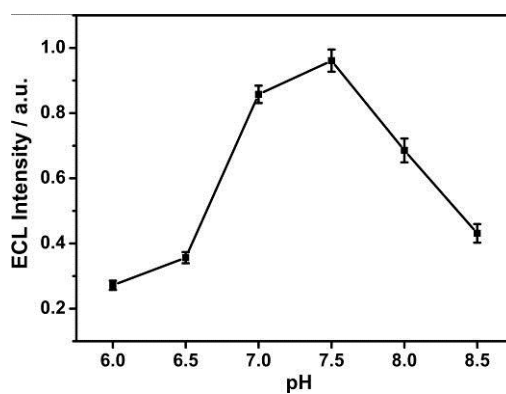*chengzhi@swu.edu.cn; Tel:(+86) 23-68254659; Fax: (+86) 23-68367257.*

Supporting figures
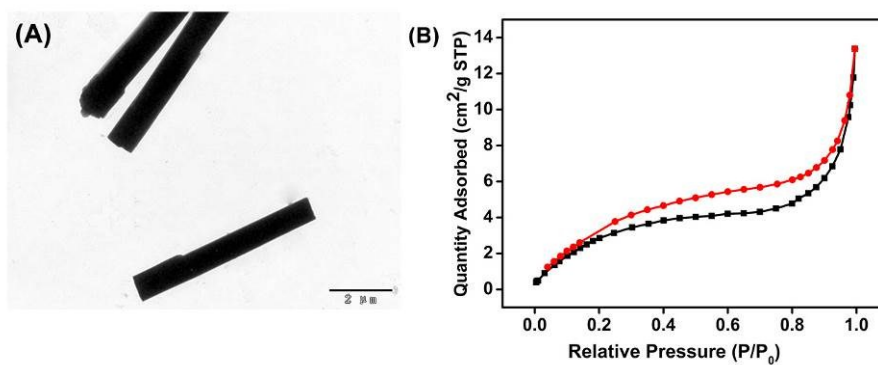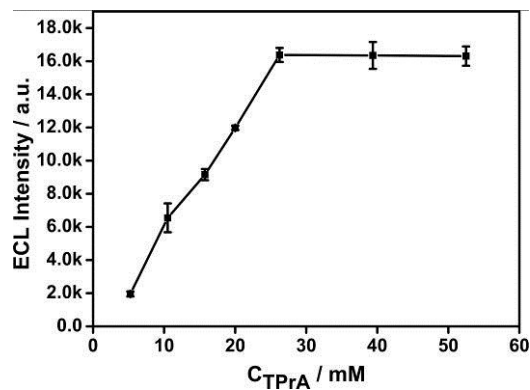

Figure S1. TEM image (A) N_2 gas sorption isotherm (B) of Ru-MOFs

Figure S2. ECL intensities of 0.5mg/ml $Ru(bpy)_3^{2+}$ and Ru-MOFs with 5mM TPrA as coreactant.

Figure S3. Optimization of the pH on the Ru-MOFs ECL system

Figure S4. Optimization of the concentration of TPrA on the Ru-MOFs ECL system

Table S1. A comparison of different analytical techniques for the determination of dopamine.

Detection method	Materials	LOD	Linear range	Ref.
Colorimetry	AHMT-AuNPs	70 nM	0.2-1.1 μM	1
Colorimetry	AgNPs	60 nM	0-0.6 μM	2
Electrochemical	F-CuInS$_2$ QDs	200 nM	0.5-40 μM	3
Electrochemical	Graphene/SnO$_2$	80 nM	0.1-10 μM	4
Electrochemiluminescence	CdTe QDs	26 pM	50 pM-10 nM	5
Electrochemiluminescence	TiO2 NPs	10 pM	10 pM-100 nM	6
Electrochemiluminescence	g-C3N4-PTCA	2.4 pM	6 pM - 30 nM	7
Electrochemiluminescence	Ru-MOFs	0.024 pM	0.1 pM-10 nM	*This work*

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