Table S1 Comparison of the recoveries of spiked Hg^{2+} standard solution in drinking water and Zhujiang River water

	Drinking water			Zhujiang River water		
Added/μM	0.5	1.0	2.0	0.5	1.0	2.0
Detected/μM	0.4271	1.0154	1.8439	0.4086	0.9609	1.8344
Recoveries/%	85.42	101.54	92.20	81.72	96.09	91.97
RSD/%	3.563	2.891	2.932	1.409	0.8040	3.303

Table S2 Crystal data and structure refinement for **Hg-MOF1**

Empirical formula	$C_{14}H_{12}N_4O_6Hg_2$
Formula weight	733.46
Crystal system	Monoclinic
Space group	$P2_1/c$
a (Å)	10.117(3)
b (Å)	20.587(6)
c (Å)	8.167(3)
α (°)	90
β (°)	95.673(6)
γ (°)	90
V (Å^3)	1692.7(9)
Z	4
ρ_{cald} (g/cm^3)	2.886
F(000)	1336.0
μ (mm^{-1})	18.159
Reflections collected	3050
GOF	1.035
R_1, wR_2 indices [I> 2σ (I)]	0.037, 0.163
R_1, wR_2 indices (all data)	0.122, 0.264

[a] $R_1=\sum||F_o|-|F_c||/\sum|F_o|$. [b] $_wR_2=\{\sum[w(F_o^2-F_c^2)^2]/\sum(F_o^2)^2\}^{1/2}$

Table S3 Selected bond lengths (Å) and bond angles (º) for **Hg-MOF1**

Hg-MOF			
Hg1-N2	2.263(13)	Hg1-Hg2-O6	127.4(3)
Hg1-N1	2.369(13)	N4-O6-Hg2	110.9(10)
Hg1-Hg2	2.5205(10)	C13-N2-C10	120.2(14)
Hg2-O3	2.239(12)	C13-N2-Hg1	124.0(11)
Hg2-O6	2.546(12)	C10-N2-Hg1	115.8(10)
O1-N3	1.21(2)	N2-C13-C12	121.1(16)
O6-N4	1.273(19)	N2-C13-C14	118.9(16)
O4-N4	1.25(2)	C12-C13-C14	119.9(16)
O5-N4	1.235(19)	C6-N1-C2	118.5(14)
N2-C13	1.33(2)	C6-N1-Hg1	113.8(10)
N2-C10	1.37(2)	C2-N1-Hg1	127.6(11)
C13-C12	1.42(2)	N3-O3-Hg2	112.6(11)
C13-C14	1.49(2)	O4-N4-O5	119.6(15)
N1-C6	1.37(2)	O4-N4-O6	118.2(15)
N1-C2	1.37(2)	O5-N4-O6	122.2(16)
O3-N3	1.303(19)	C1-C12-C13	119.7(16)
O2-N3	1.22(2)	C12-C11-C9	120.3(16)
C12-C11	1.35(3)	C10-C9-C11	117.5(16)
C11-C9	1.42(2)	C10-C9-C8	121.2(16)
C9-C10	1.41(2)	C11-C9-C8	121.3(16)
C9-C8	1.44(3)	C7-C8-C9	119.4(16)
C8-C7	1.39(3)	C8-C7-C5	120.6(16)
C7-C5	1.46(3)	C4-C5-C6	118.6(17)
C5-C4	1.39(3)	C4-C5-C7	121.9(17)
C5-C6	1.39(2)	C6-C5-C7	119.5(16)
C6-C10	1.45(2)	N1-C6-C5	122.5(16)
C2-C3	1.40(3)	N1-C6-C10	116.8(15)
C2-C1	1.49(2)	C5-C6-C10	120.4(15)
C3-C4	1.38(3)	N1-C2-C3	120.3(16)
N2-Hg1-N1	73.1(5)	N1-C2-C1	117.6(15)
N2-Hg1-Hg2	157.3(3)	C3-C2-C1	122.1(16)
N1-Hg1-Hg2	128.9(3)	C4-C3-C2	120.8(17)
O3-Hg2-Hg1	158.8(3)	C3-C4-C5	119.1(17)
O3-Hg2-O6	73.7(4)	N2-C10-C9	121.2(14)

Table S4 Crystal data and structure refinement for **Hg-MOF2**

Empirical formula	$C_{28}\ H_{24}\ Cl_4\ N_4\ Hg_3$
Formula weight	1160.08
Crystal system	Monoclinic
Space group	C 2/c
a (Å)	10.435(2)
b (Å)	16.024(3)
c (Å)	17.348(3)
α (°)	90
β (°)	94.861(3)
γ (°)	90
V (Å^3)	2890.3(9)
Z	4
ρ_{cald} (g/cm^3)	2.666
F(000)	2112.0
μ (mm^{-1})	16.293
Reflections collected	2205
GOF	1.014
R_1, wR_2 indices [I> 2σ (I)]	0.054,0.196
R_1, wR_2 indices (all data)	0.139,0.293

[a] $R_1=\sum||F_o|-|F_c||/\sum|F_o|$. [b] $_wR_2=\{\sum[_w(F_o^2-F_c^2)^2]/\sum(F_o^2)^2\}^{1/2}$

Table S5 Selected bond lengths (Å) and bond angles (º) for **Hg-MOF2**

Hg-MOF			
Hg1-Cl2	2.391(3)	C1-N1-Hg2	125.0(6)
Hg1-Cl2	2.391(3)	C12-N1-Hg2	116.1(6)
Hg1-Cl1	2.619(3)	C10-N2-C11	119.0(8)
Hg1-Cl1	2.619(3)	C10-N2-Hg2	125.2(6)
Hg2-N1	2.348(7)	C11-N2-Hg2	115.8(6)
Hg2-N2	2.351(7)	N1-C1-C2	123.0(9)
Hg2-Hg2	2.5523(8)	N1-C1-C14	117.4(8)
Hg2-Cl1	2.868(3)	C2-C1-C14	119.6(9)
N1-C1	1.322(12)	C3-C2-C1	118.0(10)
N1-C12	1.359(11)	C3-C2-H2	121.0
N2-C10	1.308(12)	C1-C2-H2	121.0
N2-C11	1.346(11)	C2-C3-C4	120.9(9)
C1-C2	1.435(14)	C2-C3-H3	119.5
C1-C14	1.510(13)	C4-C3-H3	119.5
C2-C3	1.373(14)	C3-C4-C5	125.2(9)
C2-H2	0.9300	C3-C4-C12	117.0(9)
C3-C4	1.399(14)	C5-C4-C12	117.8(10)
C3-H3	0.9300	C6-C5-C4	122.7(9)
C4-C5	1.424(13)	C6-C5-H5	118.6
C4-C12	1.441(12)	C4-C5-H5	118.6
C5-C6	1.328(15)	C5-C6-C7	121.6(9)
C5-H5	0.9300	C5-C6-H6	119.2
C6-C7	1.429(14)	C7-C6-H6	119.2
C6-H6	0.9300	C8-C7-C6	124.4(9)
C7-C8	1.390(14)	C8-C7-C11	116.4(9)
C7-C11	1.430(12)	C6-C7-C11	119.2(10)
C8-C9	1.341(14)	C9-C8-C7	120.7(9)
C8-H8	0.9300	C9-C8-H8	119.7
C9-C10	1.406(13)	C7-C8-H8	119.7
C9-H9	0.9300	C8-C9-C10	119.4(10)
C10-C13	1.528(14)	C8-C9-H9	120.3
C11-C12	1.439(14)	C10-C9-H9	120.3
C13-H13A	0.9600	N2-C10-C9	122.4(9)
C13-H13B	0.9600	N2-C10-C13	117.6(9)
C13-H13C	0.9600	C9-C10-C13	120.0(9)

C14-H14A	0.9600	N2-C11-C7	122.1(9)
C14-H14B	0.9600	N2-C11-C12	119.1(8)
C14-H14C	0.9600	C7-C11-C12	118.7(9)
Cl2Hg1Cl2	139.81(14)	N1-C12-C11	117.9(8)
Cl2Hg1Cl1	101.29(9)	N1-C12-C4	122.2(9)
Cl2Hg1Cl1	101.97(9)	C11-C12-C4	119.9(8)
Cl2Hg1Cl1	101.97(9)	C10-C13-H13A	109.5
Cl2Hg1Cl1	101.29(9)	C10-C13-H13B	109.5
Cl1Hg1Cl1	108.16(12)	H13A-C13-H13B	109.5
N1Hg2N2	71.0(3)	C10-C13-H13C	109.5
N1Hg2Hg2	135.49(17)	H13A-C13-H13C	109.5
N2Hg2Hg2	146.30(19)	H13B-C13-H13C	109.5
N1Hg2Cl1	87.9(2)	C1-C14-H14A	109.5
N2Hg2Cl1	100.77(19)	C1-C14-H14B	109.5
Hg2Hg2Cl1	100.60(6)	H14A-C14-H14B	109.5
Hg1Cl1Hg2	112.85(10)	H14A-C14-H14C	109.5
C1N1C12	118.9(8)	H14B-C14-H14C	109.5