Metal-organic	frameworks	built	from	achiral
cyclohex-1-ene-1,2	2-dicarboxylate:	syntheses,	structures	and
photoluminescenc	e properties			
Yun Gong, <sup>a</sup> Tao Wu, <sup>a</sup>	<sup><i><sup>a</sup></i> Jianhua Lin<sup>*<i>a</i></sup> and B</sup>	aoshan Wang <sup>b</sup>		
<sup>a</sup> Department of Chem	istry, College of Chem	istry and Chemic	al Engineering, <b>(</b>	Chongqing
University, Chongqir	ıg 400030, P. R. China			
<sup>b</sup> Technical Institute of	f Physics and Chami	stry Chinasa Aca	damy of Science	s Raiiina

Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, Beijing 100190, P. R. China.

Table S1 Selected bond lengths (Å) and angles (°) for complexes 1-5

Complex 1			
Zn(1)-O(1)	1.919(1)	Zn(1)-O(2)	2.385(1)
Zn(1)-N(1)	2.065(5)	O(1)-C(4)	1.258(2)
N(1)-Zn(1)-N(1)#1	96.4(3)	O(1)-Zn(1)-O(2)	56.8(4)
O(1)#1-Zn(1)-O(1)	138.3(9)	O(1)-Zn(1)-O(2)#1	95.1(6)
N(1)#1-Zn(1)-O(2)	148.4(3)	N(1)-Zn(1)-O(2)	90.5(4)
Complex 2			
Cu(1)-N(1)	1.961(2)	Cu(1)-O(3)#2	1.9434(2)
Cu(1)-O(2)	2.004(2)	Cu(1)-O(3)#3	2.3701(2)
O(3)#2-Cu(1)-N(1)	100.50(9)	N(1)-Cu(1)-O(3)#3	90.62(8)
N(1)-Cu(1)-O(1)	160.65(9)	O(2)-Cu(1)-O(1)	64.98(8)
O(3)#2-Cu(1)-O(2)	160.41(8)	O(3)#2-Cu(1)-O(3)#3	75.00(8)

Complex 3			
Cd(1)-O(5)	2.263(2)	Cd(1)-O(1)	2.2733(2)
Cd(1)-O(4)#4	2.409(2)	Cd(1)-O(3)#4	2.354(2)
Cd(1)-N(1)	2.357(2)	Cd(1)-N(2)	2.355(2)
O(3)#4-Cd(1)-O(4)#4	54.64(6)	O(1)-Cd(1)-O(4)#4	136.89(7)
O(5)-Cd(1)-N(1)	162.63(9)	O(3)#4-Cd(1)-N(1)	84.55(8)
O(5)-Cd(1)-O(1)	94.34(8)	N(2)-Cd(1)-N(1)	70.57(8)
Complex 4			
Zn(1)-O(4)#5	2.010(3)	Zn(1)-O(2)	2.162(3)
Zn(2)-O(3)#6	2.007(3)	Zn(2)-O(2)	2.156(3)
Zn(3)-O(8)#5	1.924(3)	Zn(3)-O(6)	1.980(3)
O(9)-Zn(1)-O(2)	98.79(1)	O(9)#7-Zn(1)-O(2)	81.21(1)
O(3)#6-Zn(2)-O(5)#8	170.44(1)	O(9)#7-Zn(2)-O(2)	82.77(1)
O(8)#5-Zn(3)-O(6)	115.51(2)	O(8)#5-Zn(3)-O(1)	105.41(2)
Complex 5			
Cd(1)-O(4)#9	2.281(3)	Cd(1)-O(1)#10	2.338(3)
Cd(1)-O(5)	2.397(3)	Cd(1)-O(3)#11	2.469(3)
O(1)#10-Cd(1)-O(2)#10	54.77(1)	O(4)#9-Cd(1)-O(5)	154.82(1)
O(3)-Cd(1)-O(5)	77.36(1)	O(3)-Cd(1)-O(1)#10	152.32(1)
O(4)#9-Cd(1)-O(3)	96.58(1)	O(3)-Cd(1)-O(2)#10	137.56(1)

Symmetry transformations used to generate equivalent atoms:

#1 -x+2,-x+y+1,-z+2	#2 -x+1,-y,-z+1	#3 x,y+1,z	#4 -x+1/2,y+1/2,-z+1/2
#5 x+1,y,z	#6 -x+1,-y+1,-z+1	#7 -x+2,-y+1,-z+1	#8 x,y+1,z
#9 x-1/2,-y+3/2,-z+1	#10 -x+1/2,y+1/2,z	#11 -x+1,-y+2,-z+1	







Fig.S1 The PXRD patterns of complexes 1 (a), 2 (b), 3 (c), 4 (d) and 5 (e).



Fig. S2 UV-vis absorption spectra at room temperature for  $H_2L$ , 4,4'-bpy, phen and complexes 1-5.



Fig. S3 Solid-state emission spectra at room temperature for the free organic ligands 4,4'-bpy and phen (slit width = 5nm) (a); Emission spectra for  $H_2L$  and complexes 1-5 (slit width = 10 nm) (b).









Fig.S4 Thermogravimetric carves of complexes 1 (a), 2 (b), 3 (c), 4 (d) and 5 (e).