Electronic Supporting Information

For

Temperature- and solvent-controlled dimensionality in a zinc 6-(1H-benzoimidazol-2-yl)pyridinecarboxylate system

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Fig. S1

(a) for compound 1



3

(**b**) for compound **2**



(c) for compound 5



Electr**Table** Sentary Material for CrystEngComm This journal is (c) The Royal Society of Chemistry 2009 Selected bond distances (Å) and bond angles (°) for three complexes **1**, **2** and **5**^a

		1	
Zn(1)-N(1)	2.2093(15)	N(6)-Zn(1)-N(3)	178.57(5)
Zn(1)-N(3)	1.9725(13)	N(6)-Zn(1)-N(4)	79.12(5)
Zn(1)-N(4)	2.1188(12)	N(3)-Zn(1)-N(4)	99.84(5)
Zn(1)-N(6)	1.9481(13)	N(6)-Zn(1)-O(3)	78.81(5)
Zn(1)-O(1)	2.2891(14)	N(3)-Zn(1)-O(3)	102.14(5)
Zn(1)-O(3)	2.1304(12)	N(4)-Zn(1)-O(3)	157.48(5)
N(6)-Zn(1)-N(1)	102.62(6)	N(3)-Zn(1)-N(1)	78.45(6)
N(4)-Zn(1)-N(1)	96.81(5)	O(3)-Zn(1)-N(1)	92.32(5)
N(6)-Zn(1)-O(1)	102.44(5)	N(3)-Zn(1)-O(1)	76.55(5)
N(4)-Zn(1)-O(1)	91.28(5)	O(3)-Zn(1)-O(1)	89.12(5)
N(1)-Zn(1)-O(1)	154.69(5)		
		2	
Zn(1)-N(1)	2.040(2)	O(3)-Zn(1)-N(3)	161.02(9)
Zn(1)-N(3)	1.933(2)	O(3)-Zn(1)-O(1)	97.46(8)
Zn(1)-O(1)	2.0370(18)	N(3)-Zn(1)-O(1)	80.12(8)
Zn(1)-O(3)	1.9040(18)	O(3)-Zn(1)-N(1)	99.12(8)
Zn(1)-O(2)#1	2.2993(19)	N(3)-Zn(1)-N(1)	80.02(8)
O(3)-Zn(1)-O(2)#1	92.05(8)	O(1)-Zn(1)-N(1)	159.04(8)
O(1)-Zn(1)-O(2)#1	96.53(7)	N(3)-Zn(1)-O(2)#1	106.91(8)
N(1)-Zn(1)-O(2)#1	95.61(7)		
		5	
Zn(1)-N(1)	1.927(3)	N(1)-Zn(1)-O(3)	168.81(12)
Zn(1)-N(2)	2.048(3)	N(1)-Zn(1)-N(2)	80.16(11)
Zn(1)-O(1)	2.050(2)	O(3)-Zn(1)-N(2)	99.09(11)
Zn(1)-O(2)#2	2.242(2)	N(1)-Zn(1)-O(1)	79.90(10)
Zn(1)-O(3)	1.934(3)	O(3)-Zn(1)-O(1)	98.61(11)
O(2)-Zn(1)#3	2.242(2)	N(1)-Zn(1)-O(2)#2 97.28(10	
N(2)-Zn(1)-O(1)	157.87(10)	N(2)-Zn(1)-O(2)#2 100.35(10)	
O(3)-Zn(1)-O(2)#2	93.84(11)	O(1)-Zn(1)-O(2)#2	91.60(9)

^aSymmetry transformations used to generate equivalent atoms: #1 -x+1,y-1/2,-z+1/2; #2 -x+1,y-1/2,-z+3/2; #3 -x+1,y+1/2,-z+3/2.

Elect**Table S3** Interv Material for CrystEngComm This journal is (c) The Royal Society of Chemistry 2009 **Table S3** Distances (Å) and angles (°) of hydrogen bonds for compounds **1**, **2** and **5**^b

D-H···A	d(H···A)		d(D····A)	∠D-H…A		
1						
O(1W)-H(1WA)-O(2)#1	2.067(9)		2.753(3)	138.1(13)		
O(2W)-H(2WB)O(3W)	2.168(13)		2.927(7)	150.7(17)		
O(3W)-H(3WA)-O(2W)	2.245(13)		2.927(7)	138.6(11)		
N(2)-H(2)···O(3)#2	2.132(12)		2.8839(18)	145.3(12)		
N(5)-H(5)···O(1)#3	2.101(12)		2.8291(16)	142.0(12)		
C(16)-H(16)-O(2W)	2.668(12)		3.436(7)	140.4(11)		
C(23)-H(23)····O(3W)	2.528(13)		3.330(7)	144.7(12)		
	ź	2				
O(1W)-H(1WA)····O(4)#4	1.923(13)		2.752(3)	168(3)		
O(1W)-H(1WB)O(2)#5	2.204(19)		3.001(3)	158(4)		
O(2W)-H(2WB)O(1W)#6	1.934(14)		2.762(3)	167(3)		
O(2W)-H(2WA)····O(4)#7	2.07(2)		2.842(3)	153(3)		
O(2W)-H(2WA)····O(3)#7	2.61(3)		3.209(3)	129(4)		
N(2)-H(2)-O(2W)#1	1.91(3)		2.767(3)	171.6		
Cg1…Cg2			3.582			
Cg1…Cg1a			3.782			
		5				
O(8)-H(8A)····O(7)#1	2.31(8)		2.950(6)	170(10)		
O(8)-H(8B)O(4)#8	2.05(7)		2.870(5)	154(7)		
N(3)-H(3)-···O(8)#9	1.90(7)		2.754(4)	177(6)		
C(5)-H(5)-O(5)#10	2.56(6)		3.182(5)	135(7)		
Cg1…Cg2			3.510			
Cg1…Cg1a			3.867			

^bSymmetry transformation used to generate equivalent atoms: #1 x,y,z-1; #2 -x+1,-y+2,-z+1; #3 -x+2,-y+2,-z+2; #4 x-1,y,z; #5 x,y,z; #6 x,-y+1/2,z+1/2; #7 -x+1,-y+1,-z+1; #8 -x,-y+1,-z+1; #9 x,y,z+; #10 x,2+y,z. Cg1 (benzimidale), Cg1a (pyridine) and Cg2 respectively denote the centroids of six-membered and five-membered rings in the asymmetrical ligand HL.









Fig. S8



Fig. S9





(c) for 5



