Electronic Supplementary Information

Table S1. Selected bond distances (Å) and angles (°) for **1**.

Compund **1**			
Zn(1)-O(1)	1.927(3)	Zn(1)-O(3)^{i}	1.955(3)
Zn(1)-N(1)	2.042(3)	Zn(1)-N(4)^{ii}	2.048(3)
O(1)-Zn(1)-O(3)^{i}	118.82(12)	O(1)-Zn(1)-N(1)	101.62(12)
O(3)^{i}-Zn(1)-N(1)	115.26(12)	O(1)-Zn(1)-N(4)^{ii}	118.96(12)
O(3)^{i}-Zn(1)-N(4)^{ii}	99.84(12)	N(1)-Zn(1)-N(4)^{ii}	101.74(12)

Symmetry codes for **1**: ^{i}-x+1, -y+1, -z; ^{ii}-x+2, -y, -z.

Table S2. Selected bond distances (Å) and angles (°) for **2**.

Zn(1)-O(3)^{i}	1.933(3)	Zn(1)-O(1)	1.909(3)
Zn(1)-N(1)	1.992(4)	Zn(1)-N(4)^{ii}	2.033(4)
O(3)^{i}-Zn(1)-O(1)	104.75(16)	O(3)^{i}-Zn(1)-N(1)	113.8(2)
O(1)-Zn(1)-N(1)	127.6(2)	O(3)^{i}-Zn(1)-N(4)^{ii}	105.7(2)
O(1)-Zn(1)-N(4)^{ii}	99.57(16)	N(1)-Zn(1)-N(4)^{ii}	102.59(15)

Symmetry codes for **2**: ^{i} x, -y+1/2, z-1/2; ^{ii}x-1, y, z.

Table S3. Selected bond distances (Å) and angles (°) for **3**.

Cd(1)-O(4)^{i}	2.229(4)	Cd(1)-N(1)	2.244(5)
Cd(1)-O(2)	2.271(4)	Cd(1)-N(3)	2.285(5)
Cd(1)-O(1)	2.520(4)	Cd(1)-O(3)^{i}	2.569(3)
O(4)^{i}-Cd(1)-N(1)	99.09(16)	O(4)^{i}-Cd(1)-O(2)	138.14(16)
N(1)-Cd(1)-O(2)	104.22(16)	O(4)^{i}-Cd(1)-N(3)	115.04(17)
N(1)-Cd(1)-N(3)	112.53(18)	O(2)-Cd(1)-N(3)	87.31(14)
O(4)^{i}-Cd(1)-O(1)	93.56(17)	N(1)-Cd(1)-O(1)	87.98(15)

O(2)-Cd(1)-O(1)	53.68(14)	N(3)-Cd(1)-O(1)	140.06(15)
$O(4)^{i}$-Cd(1)-$O(3)^{i}$	53.73(13)	N(1)-Cd(1)-$O(3)^{i}$	152.77(14)
O(2)-Cd(1)-$O(3)^{i}$	99.13(14)	N(3)-Cd(1)-$O(3)^{i}$	82.10(14)
O(1)-Cd(1)-$O(3)^{i}$	94.80(13)		

Symmetry codes for **3**: ^{i} -x+2, y+1/2, -z+1/2.

Table S4. Selected bond distances (Å) and angles (^{o}) for **4**.

Zn(1)-O(1)	1.927(2)	Zn(1)-$O(3)^{i}$	1.969(2)
Zn(1)-$N(4)^{ii}$	2.011(2)	Zn(1)-N(1)	2.016(2)
O(1)-Zn(1)-$O(3)^{i}$	99.51(7)	O(1)-Zn(1)-$N(4)^{ii}$	115.97(7)
$O(3)^{i}$-Zn(1)-$N(4)^{ii}$	106.24(7)	O(1)-Zn(1)-N(1)	112.36(7)
$O(3)^{i}$-Zn(1)-N(1)	110.51(8)	$N(4)^{ii}$-Zn(1)-N(1)	111.35(7)

Symmetry code for **4**: ^{i} -x+5/2, y-1/2, -z+1/2; ^{ii} x+1/2, -y+1/2, z-1/2.

Table S5. Selected bond distances (Å) and angles (^{o}) for **5**.

Cd(1)-$N(4)^{i}$	2.232(6)	Cd(1)-O(1)	2.261(5)
Cd(1)-$O(4)^{ii}$	2.295(4)	Cd(1)-N(1)	2.300(6)
Cd(1)-O(2)	2.455(5)	Cd(1)-$O(3)^{ii}$	2.519(5)
$N(4)^{i}$-Cd(1)-O(1)	98.9(2)	$N(4)^{i}$-Cd(1)-$O(4)^{ii}$	103.8(2)
O(1)-Cd(1)-$O(4)^{ii}$	137.16(19)	$N(4)^{i}$-Cd(1)-N(1)	111.5(2)
O(1)-Cd(1)-N(1)	121.2(2)	$O(4)^{ii}$-Cd(1)-N(1)	83.10(18)
$N(4)^{i}$-Cd(1)-O(2)	152.94(19)	O(1)-Cd(1)-O(2)	54.52(18)
$O(4)^{ii}$-Cd(1)-O(2)	100.45(17)	N(1)-Cd(1)-O(2)	83.02(18)
$N(4)^{i}$-Cd(1)-$O(3)^{ii}$	87.01(19)	O(1)-Cd(1)-$O(3)^{ii}$	92.3(2)
$O(4)^{ii}$-Cd(1)-$O(3)^{ii}$	53.79(16)	N(1)-Cd(1)-$O(3)^{ii}$	136.50(19)
O(2)-Cd(1)-$O(3)^{ii}$	97.90(17)		

Symmetry code for **5**: ^{i} -x+1/2, -y, z-1/2; ^{ii}-x+2, y+1/2, -z-1/2.

Table S6. Selected bond distances (Å) and angles (°) for **6**.

Zn(1)-O(3)^{i}	1.971(3)	Zn(1)-O(1)	1.971(3)
Zn(1)-N(1)	2.001(2)	Zn(1)-N(4)^{ii}	2.043(2)
O(3)^{i}-Zn(1)-O(1)	105.97(8)	O(3)^{i}-Zn(1)-N(1)	120.91(13)
O(1)-Zn(1)-N(1)	121.22(14)	O(3)^{i}-Zn(1)-N(4)^{ii}	97.61(12)
O(1)-Zn(1)-N(4)^{ii}	98.62(13)	N(1)-Zn(1)-N(4)^{ii}	107.43(8)

Symmetry codes for **6**: ^{i}-x+2, -y+2, z-1/2; ^{ii}x-1/2, -y+1/2, z.

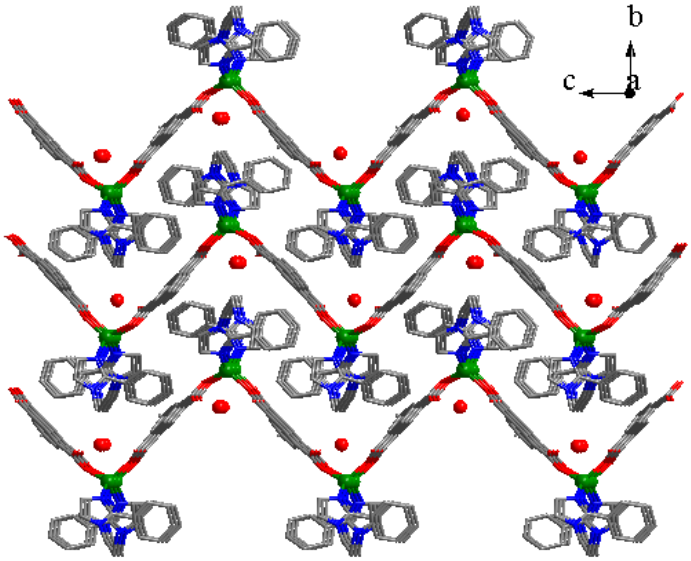

Fig. S1. The packing diagram of the 2D polymeric layers in **2**.

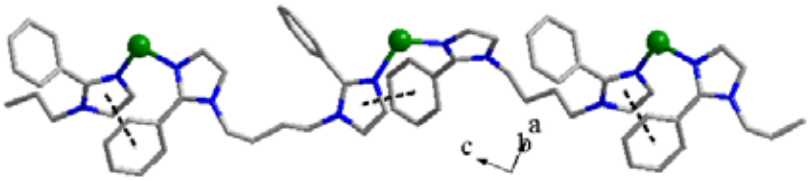

Fig. S2. View of the π–π interactions of bbip ligand in **4**.

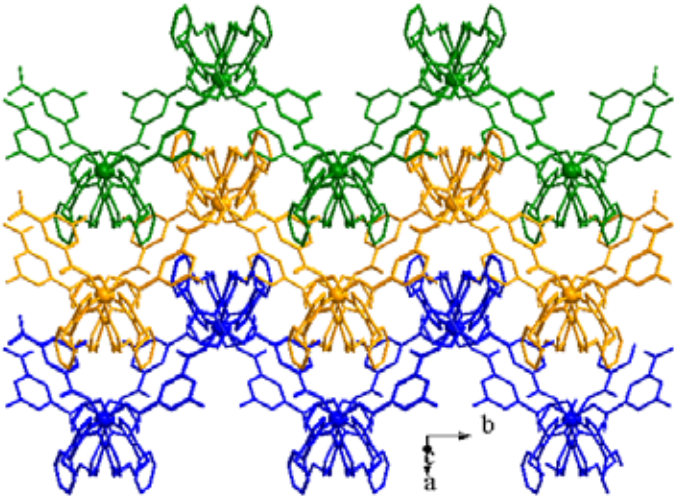

Fig. S3. The packing diagram of the 2D polymeric layers in **4**.

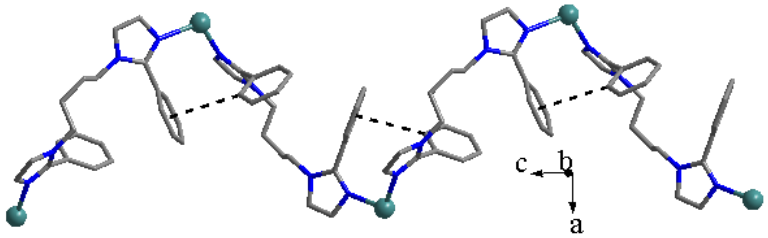

Fig. S4. View of the C–H…π interactions of bbip ligand in **5**.

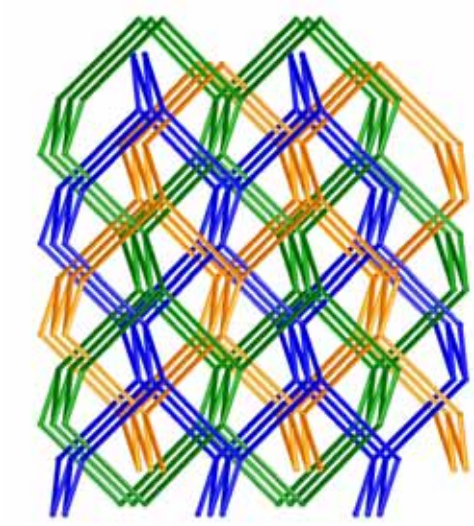

Fig. S5. View of three-fold interpenetrating diagram (OLEX) in **5**.

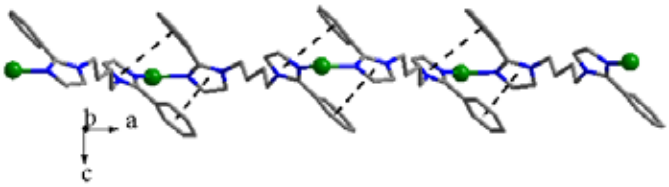

Fig. S6. View of the π–π interactions of bbip ligand in **6**.

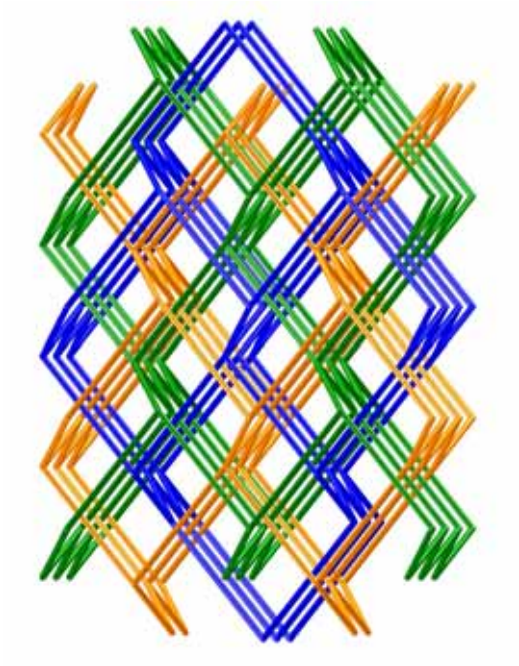

Fig. S7. Three-fold interpenetrating (OLEX) diagram of **6**.