

## Electronic Supplementary Information (ESI)

### A 2D→3D net with coexistence of polycatenation and polythreading constructed by long rigid and flexible ligands

Fang-Hua Zhao, Yun-Xia Che and Ji-Min Zheng\*

Department of Chemistry, Nankai University, Tianjin 300071, P. R. China.

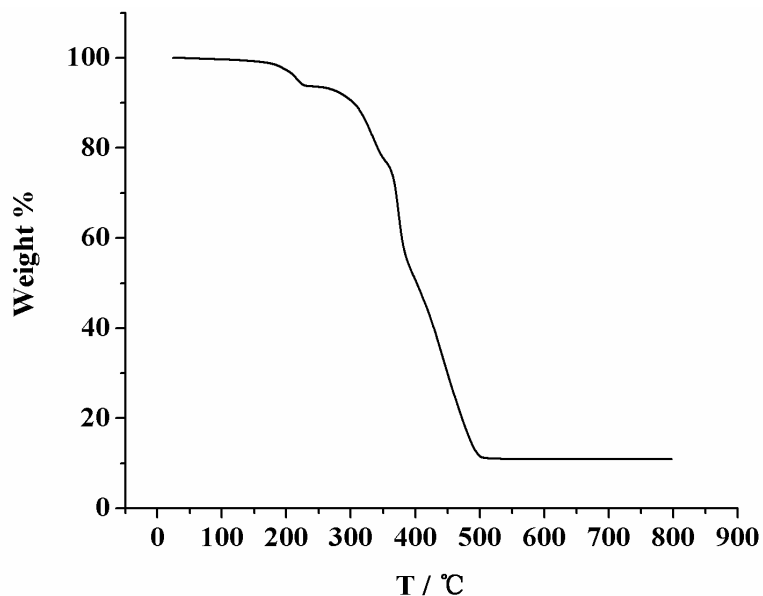


Fig. S1. The TG diagram of **1**.

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

Ni(1)-O(1)	2.0915(14)	Ni(1)-O(2)	2.2247(15)	Ni(1)-O(5)	2.0600(14)
Ni(1)-N(1)	2.0976(17)	Ni(1)-N(4)	2.0905(17)	Ni(1)-N(5)	2.0575(18)
O(1)-Ni(1)-N(1)	88.16(6)	O(5)-Ni(1)-O(2)	102.72(6)	N(5)-Ni(1)-N(1)	94.91(7)
O(1)-Ni(1)-O(2)	61.05(6)	N(1)-Ni(1)-O(2)	84.20(6)	N(5)-Ni(1)-N(4)	90.95(7)
O(5)-Ni(1)-N(1)	91.49(6)	N(4)-Ni(1)-N(1)	174.00(6)	N(5)-Ni(1)-O(1)	98.10(7)
O(5)-Ni(1)-N(4)	88.94(6)	N(4)-Ni(1)-O(1)	89.75(6)	N(5)-Ni(1)-O(2)	159.13(6)
O(5)-Ni(1)-O(1)	163.72(5)	N(4)-Ni(1)-O(2)	89.87(6)	N(5)-Ni(1)-O(5)	98.15(7)

**Table S2.** Hydrogen bond lengths (Å) and angles (°) for **1**

D-H...A	d(D-H)	d(H...A)	d(D...A)	∠(D-H...A)
O(5)-H(5C)...O(2)#7	0.85	1.94	2.780(2)	167.4
O(5)-H(5D)...O(3)#6	0.87	1.79	2.639(2)	165.5
O(6)-H(6C)...O(1)	0.86	1.89	2.745(2)	174.3
O(6)-H(6D)...O(3)#5	0.85	1.91	2.751(2)	167.1
O(7)-H(7B)...O(3)#4	0.84	2.7	3.187(10)	118.4