

# Supplementary Information

**Title:** Syntheses and Solid State Structures of Hybrid d<sup>10</sup> Metal-Organic Frameworks Based on Methylenediisophthalic Acid (H<sub>4</sub>MDIP)

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Table 1 Hydrogen bond distances [Å] and angles [°] in complexes **1-4**.  
(D, donor atom; A, acceptor atom).

| D – H    | d(D – H) | d(H···A) | ∠DHA  | d(D···A) | A    |
|----------|----------|----------|-------|----------|------|
| <b>1</b> |          |          |       |          |      |
| O6-H102  | 0.82     | 1.83     | 169.1 | 2.636(3) | O5#1 |
| O4-H101  | 0.82     | 1.84     | 160.3 | 2.626(3) | O8#1 |
| <b>2</b> |          |          |       |          |      |
| O5-H5A   | 0.85     | 1.48     | 179.7 | 2.331(7) | O3#2 |
| <b>3</b> |          |          |       |          |      |
| O6-H6A   | 0.82     | 1.80     | 161.8 | 2.595(6) | O5#3 |
| O9-H9A   | 0.85     | 1.90     | 166.5 | 2.730(7) | O3#4 |
| <b>4</b> |          |          |       |          |      |
| N1-H1A   | 0.90     | 2.14     | 150.7 | 2.960(6) | O2#5 |
| N2-H2A   | 0.90     | 2.52     | 130.2 | 3.181(7) | O1#6 |
| O5-H5B   | 0.85     | 1.84     | 171.2 | 2.682(5) | O1#6 |
| O6-H6C   | 0.85     | 1.86     | 169.7 | 2.696(5) | O3#6 |
| N1-H1B   | 0.90     | 2.18     | 146.8 | 2.978(5) | O4#7 |
| N2-H2B   | 0.90     | 2.47     | 143.2 | 3.238(6) | O7#8 |
| O5-H5A   | 0.85     | 1.92     | 173.4 | 2.768(5) | O6   |
| O6-H6D   | 0.85     | 1.92     | 179.7 | 2.768(5) | O5   |
| O7-H7C   | 0.85     | 2.20     | 136.0 | 2.876(6) | O6#9 |

Symmetry codes: #1 -x+2, -y+1, -z+2; #2 x, y, z-1; #3 -x-1, -y+1, -z+1; #4 x, y, z+1; #5 -x+3/2, -y+1/2, -z+2;

#6 -x+3/2, -y+3/2, -z+2; #7 -x+2, -y+1, -z+2; #8 x+1/2, -y+3/2, z+1/2; #9 -x+1/2, y+1/2, -z+3/2.

The TG figures of complexes **1-4**:

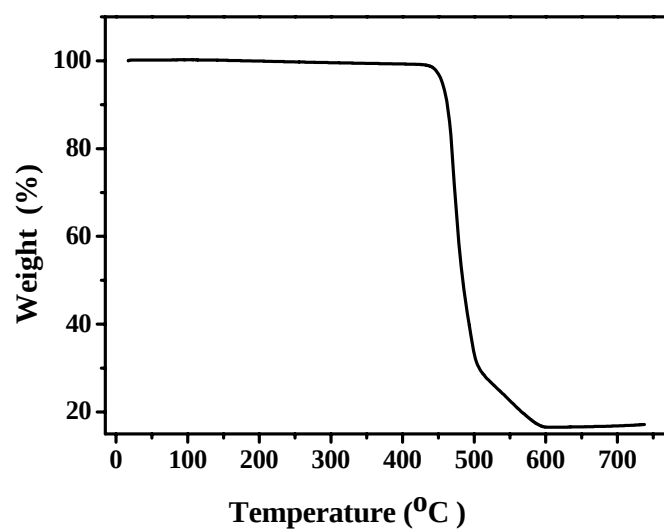


Fig. 1 TG curve of **1**.

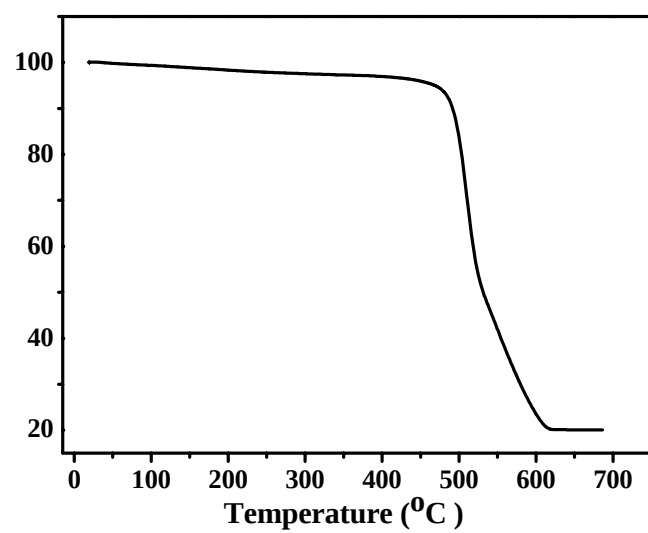


Fig. 2 TG curve of **2**.

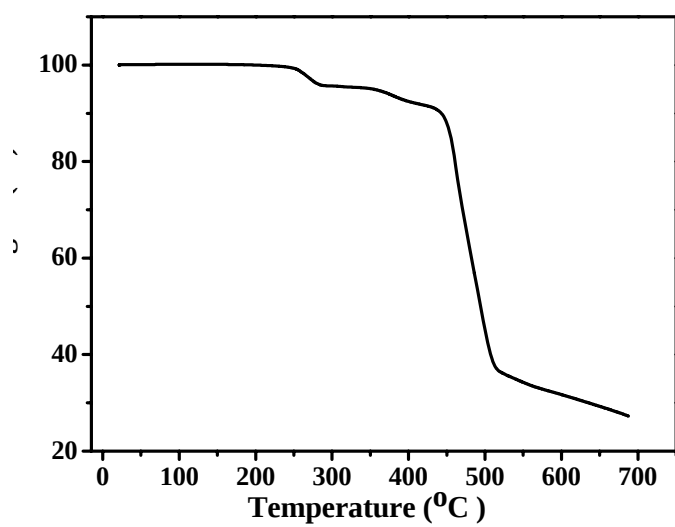


Fig. 3 TG curve of 3.

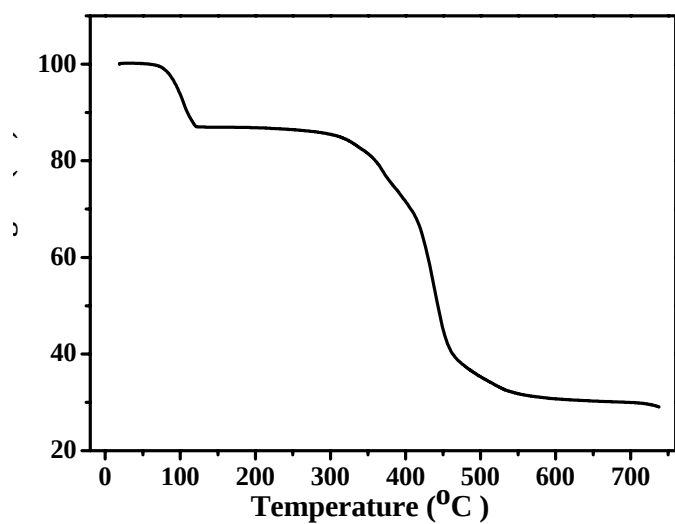


Fig. 4 TG curve of 4.