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# Rapidly Assessing the Activation Conditions and Porosity of Metal-Organic Frameworks using Thermogravimetric Analysis

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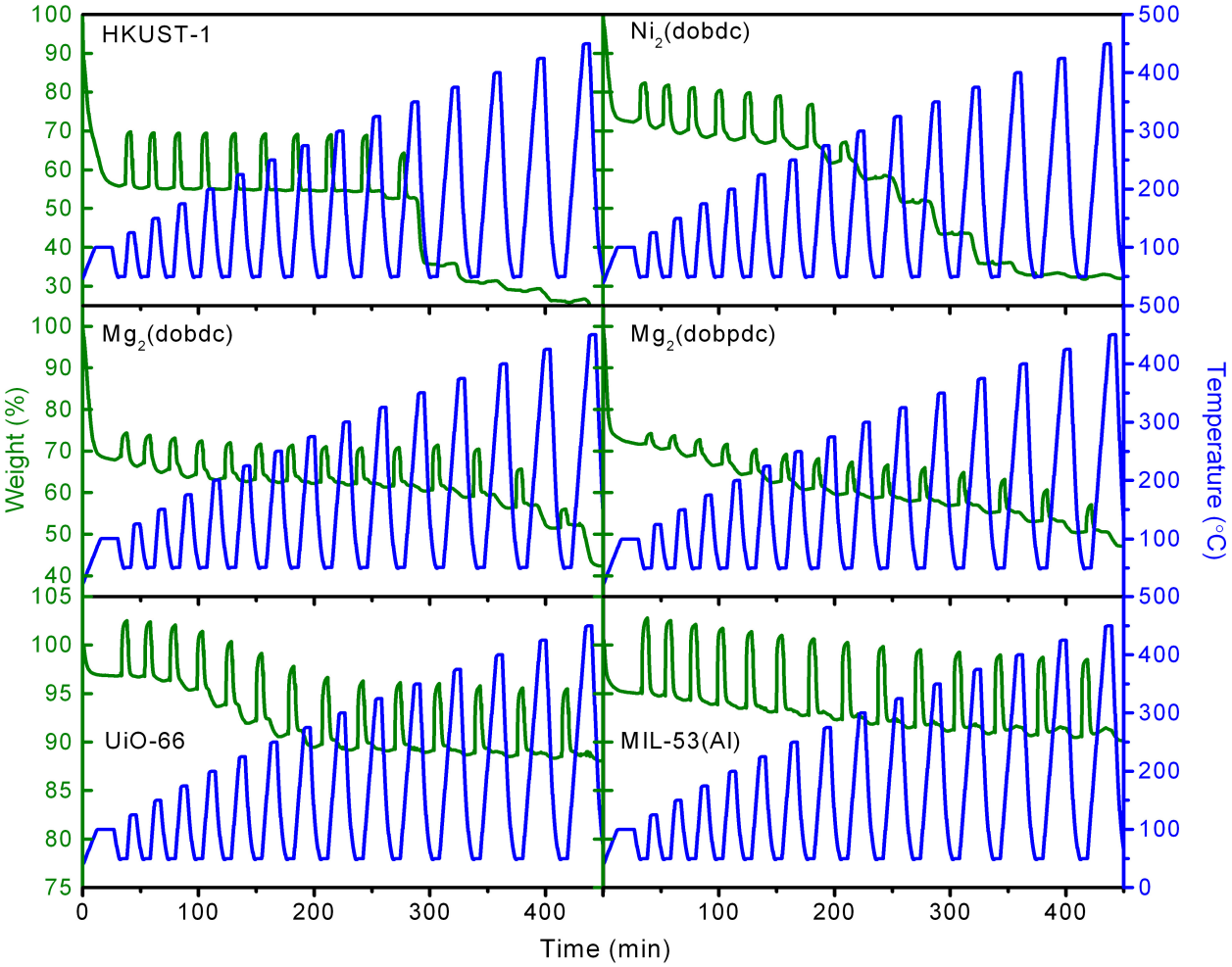


**Fig. S1:** Thermogravimetric analysis weight and temperature traces for the six metal-organic frameworks reported in Fig. 2.

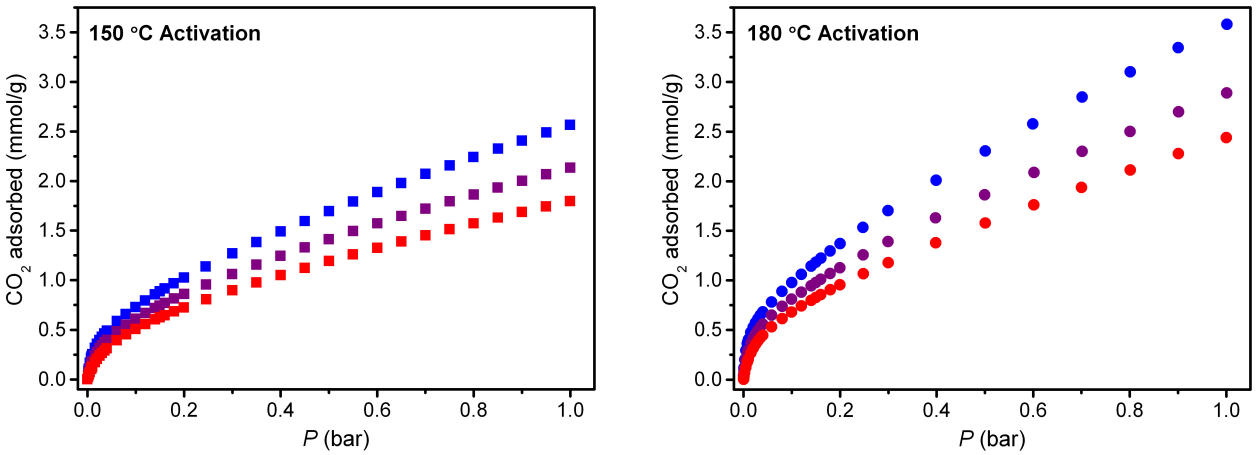


**Fig. S2:** Excess carbon dioxide adsorption isotherms at 25 (blue), 35 purple, and 45 °C (red) for Mn-BTT activated at 150 °C (squares) and 180 °C (circles).

**Table S1.**
The $CO_2$ adsorption isotherms for Mn-BTT activated at 150 °C were fit with a dual-site Langmuir-Freundlich model; $q_{sat,i}$ is the saturation capacity in mmol/g, $b_i$ is the Langmuir parameter in $bar^{-v}$, and $v_i$ is the Freundlich parameter.[i]

| | 25 °C | 35 °C | 45 °C |
|---|---|---|---|
| $q_{sat1}$ | 0.38 | 0.35 | 0.34 |
| $b_1$ | 71.1 | 47.1 | 27.68 |
| $v_1$ | 0.931 | 0.95 | 0.960 |
| $q_{sat2}$ | 22.9 | 28.9 | 24.0 |
| $b_2$ | 0.105 | 0.066 | 0.065 |
| $v_2$ | 0.784 | 0.771 | 0.789 |

**Table S2.**
The $CO_2$ adsorption isotherms for Mn-BTT activated at 180 °C were fit with a dual-site Langmuir-Freundlich model; $q_{sat,i}$ is the saturation capacity in mmol/g, $b_i$ is the Langmuir parameter in $bar^{-v}$, and $v_i$ is the Freundlich parameter.[i]

| | 25 °C | 35 °C | 45 °C |
|---|---|---|---|
| $q_{sat1}$ | 50 | 50 | 50 |
| $b_1$ | .0655 | 0.0508 | 0.0414 |
| $v_1$ | 0.807 | 0.813 | 0.829 |
| $q_{sat2}$ | 0.506 | 0.473 | 0.459 |
| $b_2$ | 123.5 | 80.52 | 41.2 |
| $v_2$ | 0.923 | 0.950 | 0.942 |

**Supplementary References**

[i] J. A. Mason, K. Sumida, Z. R. Herm, R. Krishna and J. R. Long, *Energy Environ. Sci.*, 2011, **4**, 3030.