

SUPPORTING INFORMATION

Selectivity of CO₂ via Pore Space Partition in Zeolitic Boron

Imidazolate Frameworks

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Materials and Instrumentation. All reagents were purchased commercially and used without further purification. All Powder X-ray diffraction (PXRD) analyses were recorded on a Rigaku Dmax2500 diffractometer with Cu K α radiation ($\lambda = 1.54056 \text{ \AA}$) with a step size of 0.05° . Thermal stability studies were carried out on a NETSCHZ STA-449C thermoanalyzer with a heating rate of $10^\circ\text{C}/\text{min}$ under an N₂ atmosphere. Single crystal X-ray diffraction data for BIF-24 was collected on a XCalibur E charge coupled device diffractometer equipped with confocal-monochromated Mo KR radiation ($\lambda = 0.71073 \text{ \AA}$) at 273K.

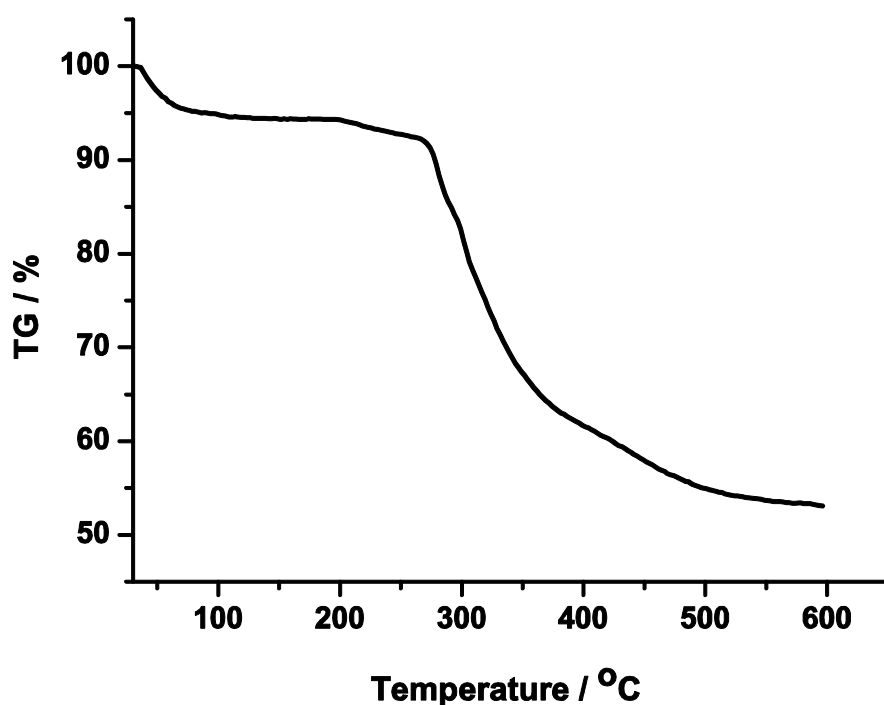


Figure S1. The TGA plot of BIF-41.

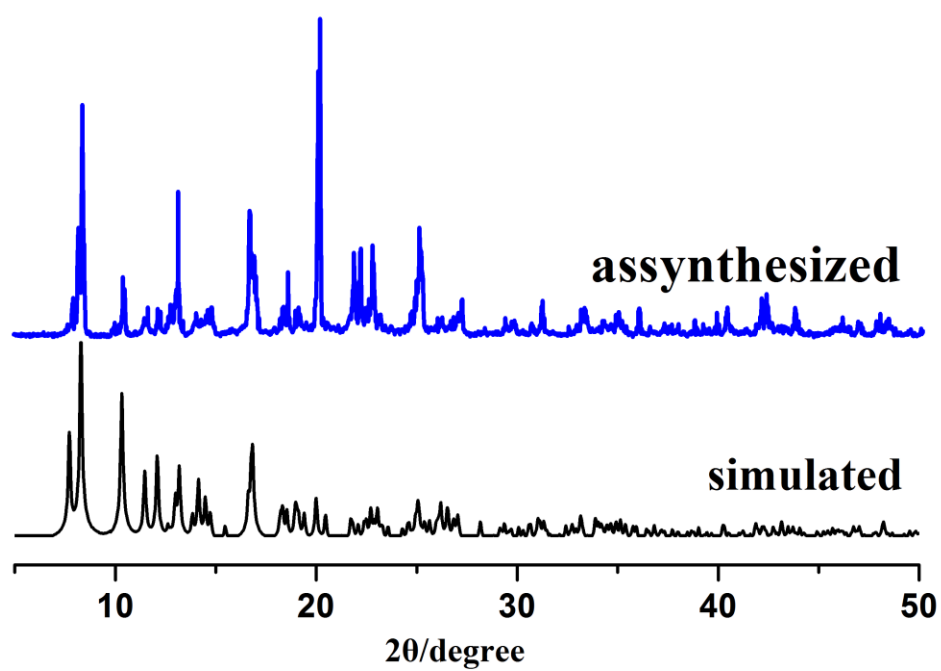


Figure S2. The Powder XRD patterns of **BIF-41**

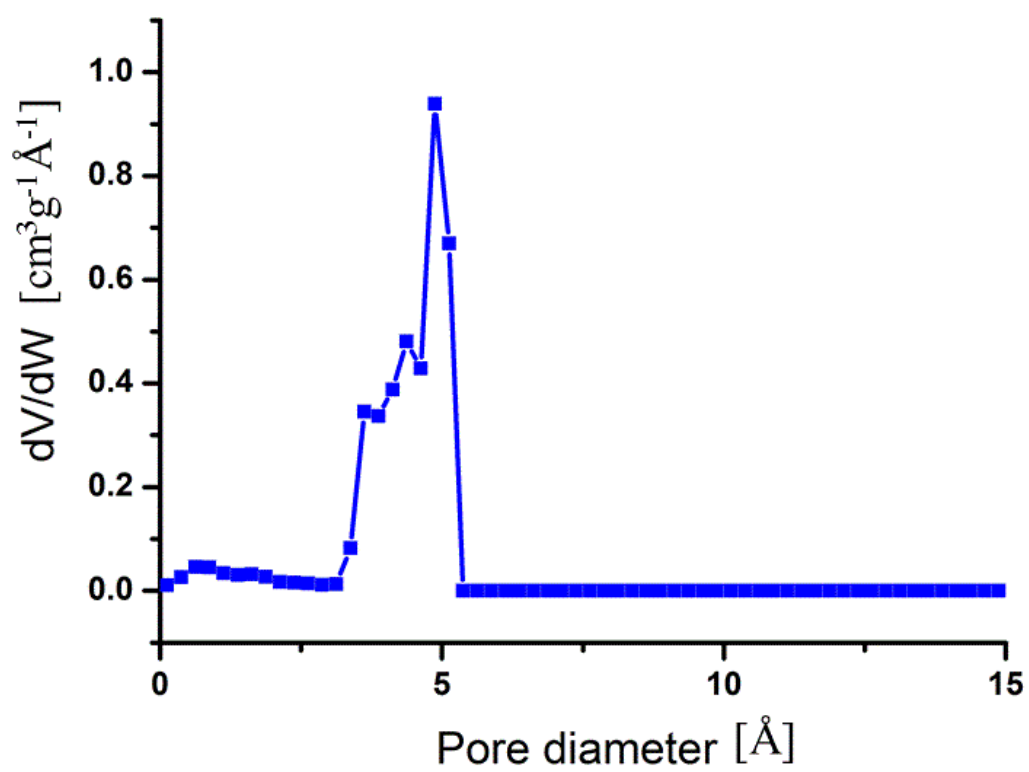


Figure S3. Pore size distribution curves for **BIF-41** calculated by Poreblazer

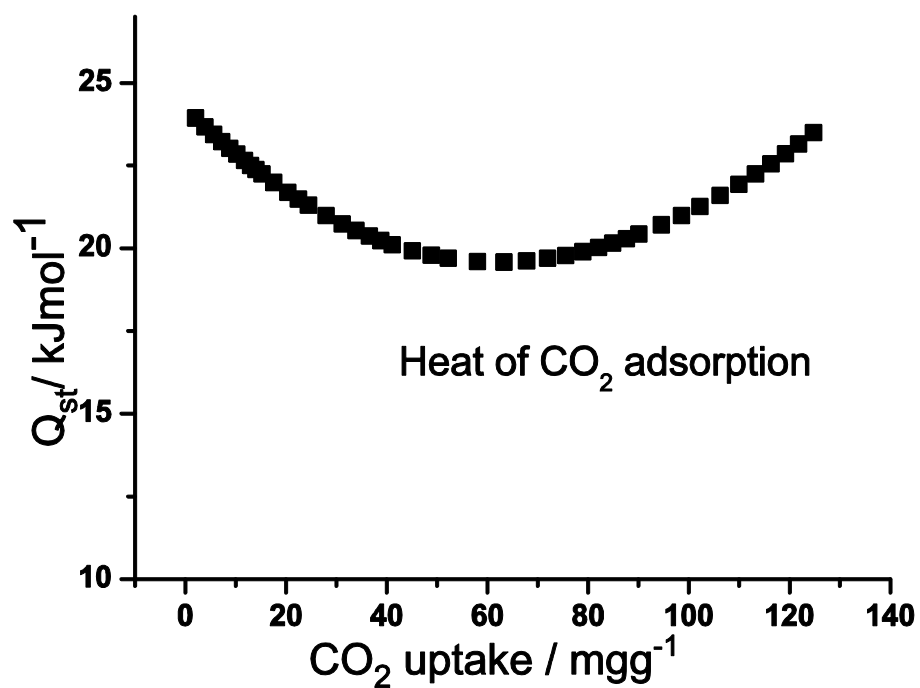


Figure S4. The Isostatic heat of CO₂ adsorption for **BIF-41** estimated by the virial equation.

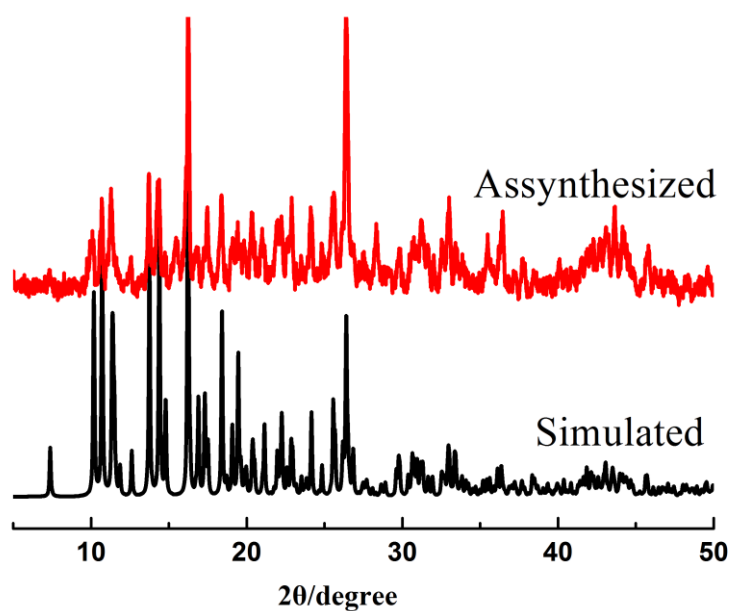


Figure S5. The Powder XRD patterns of **BIF-42**

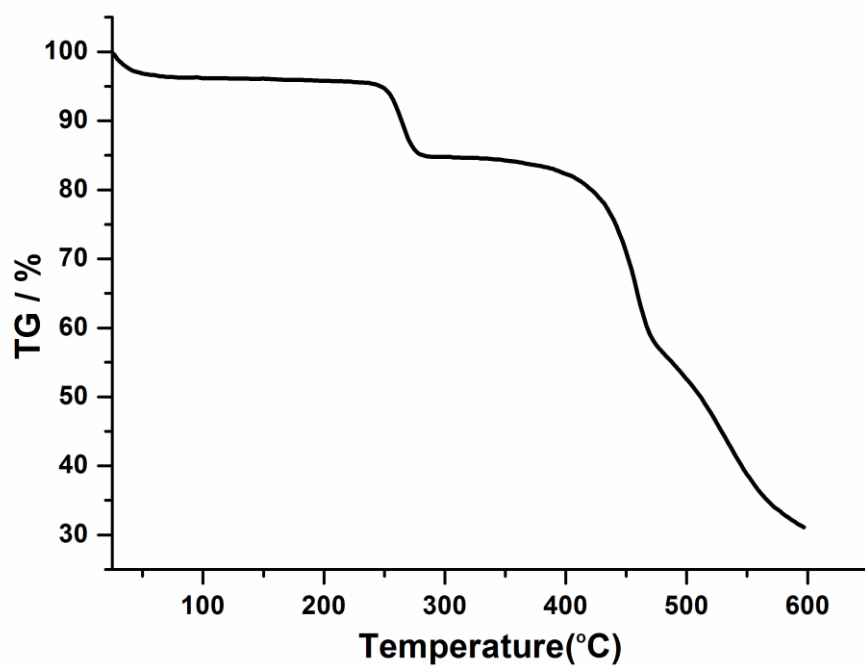


Figure S6. The TGA plot of **BIF-42**.