Electronic Supplementary Material (ESI) for Dalton Transactions

Supporting Information

A highly porous 4,4-paddlewheel-connected NbO-type metal–organic framework with large gas-uptake capacity

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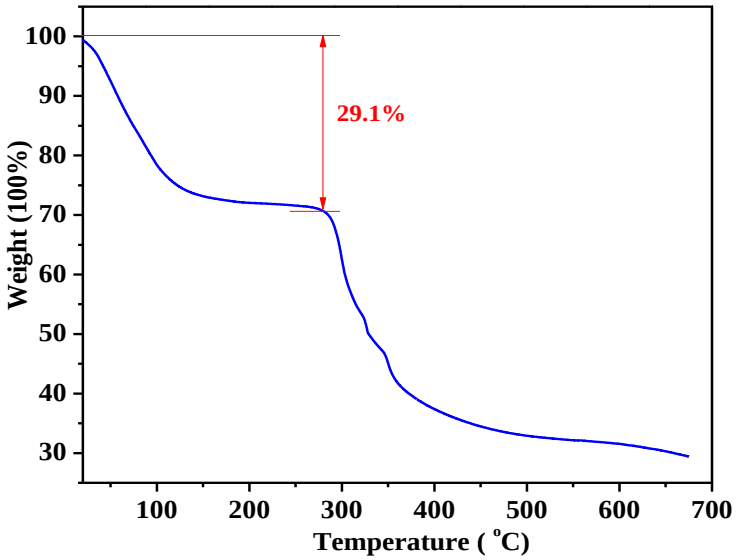

Fig. S1 TGA data of acetone-exchanged sample of HNUST-2.

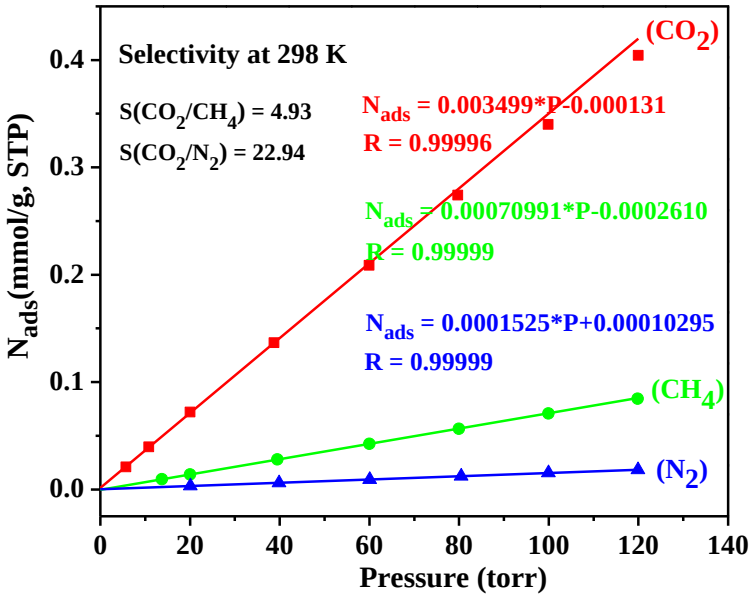

Fig. S2 The fitting initial slope for CO_2, CH_4 and N_2 isotherms for HNUST-2 collected at 298 K (N_{ads} = gases uptake; R = related coefficient). The calculated selectivity of CO_2/CH_4 and CO_2/N_2 is 4.9 and 22.9, respectively.

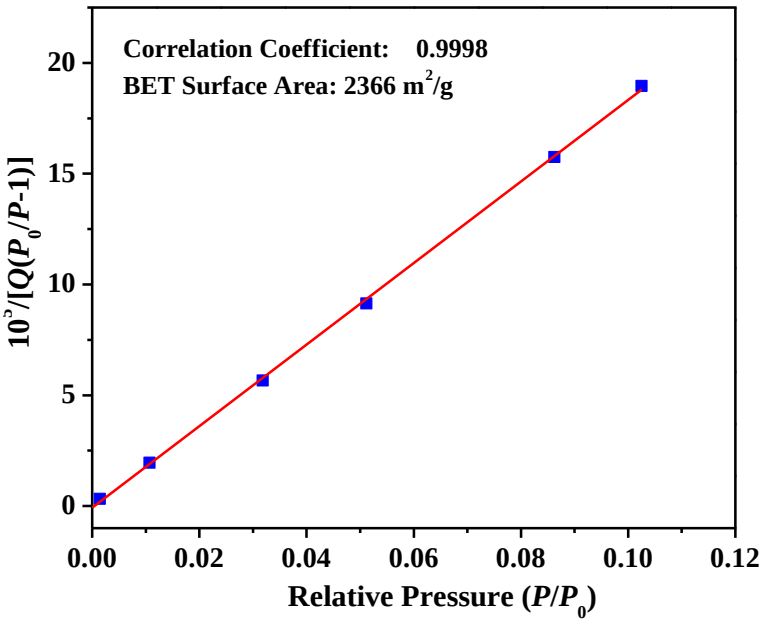

Fig. S3 The BET plots for HNUST-2 in the chosen range (P/P_0 = 0.001 – 0.1).

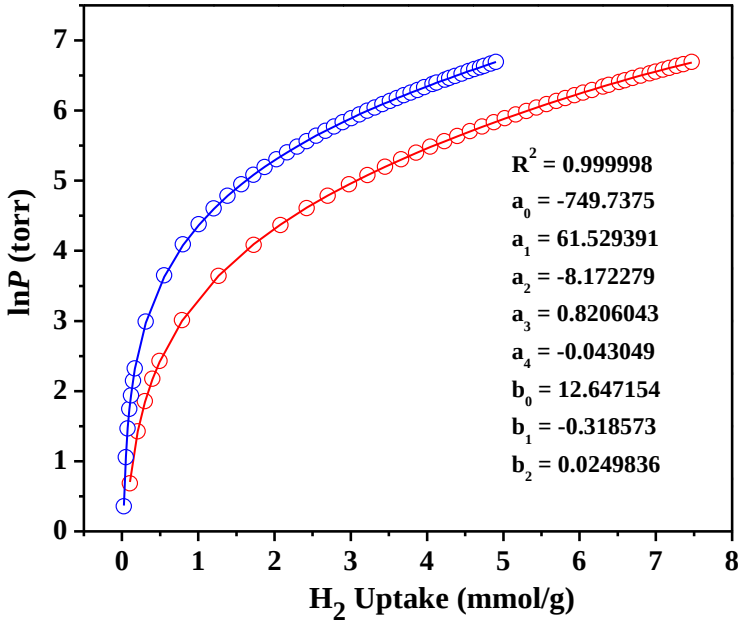

Fig. S4 The H_2 isotherms at 77 K and 87 K (red and blue symbols) and the virial equation fits (red and blue lines) for HNUST-2.

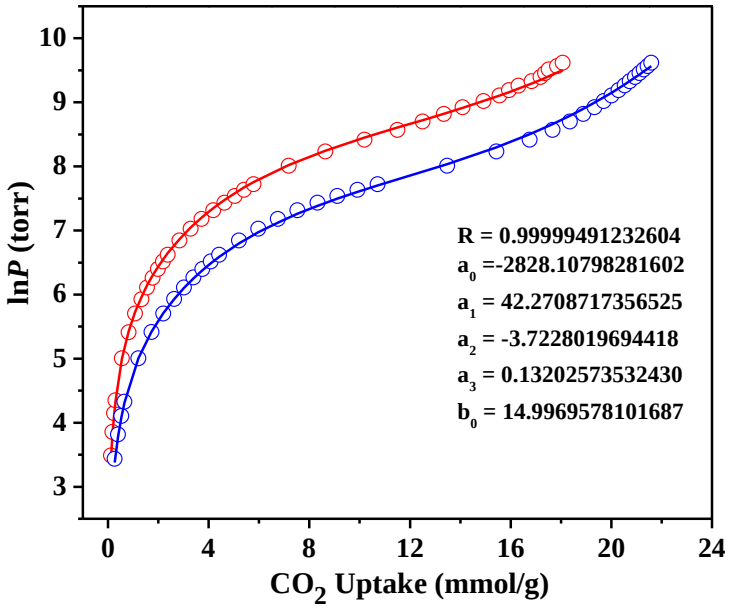

Fig. S5 The CO_2 isotherms at 273 K and 298 K (blue and red symbols, respectively) and the corresponding Virial equation fits (blue and red lines, respectively) for HNUST-2.

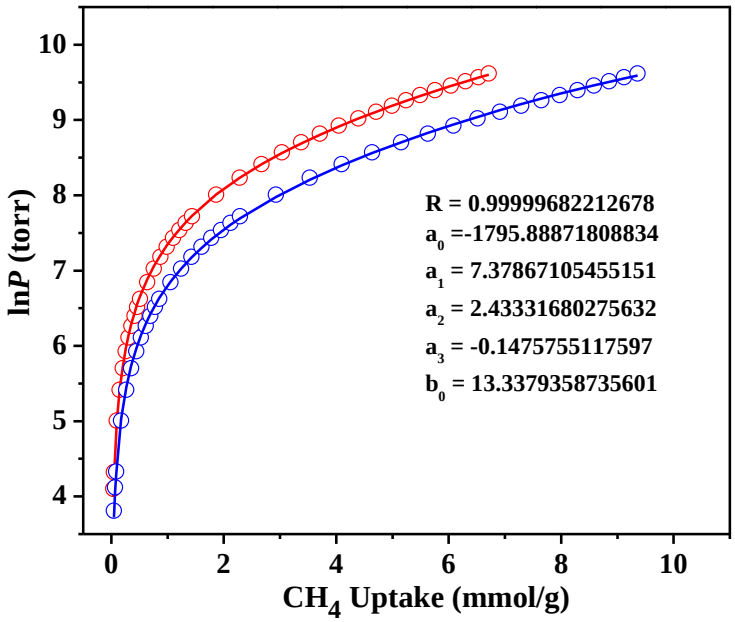

Fig. S6 The CH_4 isotherms at 273 K and 298 K (blue and red symbols, respectively) and the corresponding Virial equation fits (blue and red lines, respectively) for HNUST-2.

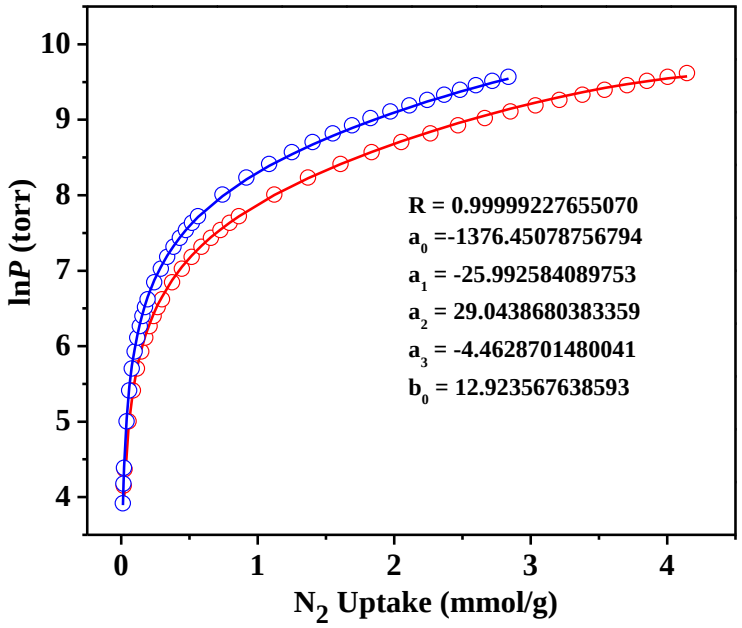

Fig. S7 The N_2 isotherms at 273 K and 298 K (red and blue symbols, respectively) and the corresponding Virial equation fits (red and blue lines, respectively) for HNUST-2.