Supplementary Material

**Ultramicroporous silicon nitride ceramics for CO2 capture**

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FIG S1. The Tóth fit of CO2 adsorption isotherm of HTT600NH up to 15 bars at (a) 273 K and (b) 373 K.

TABLE SI. CO2 adsorption capacities of different materials at 1 bar represented in FIG 5.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Sample | Specific Surface Area[m2 g-1] | Pore size[nm] | Adsorption capacity[mmol g-1] | Ref. |
| MOMs | SIFSIX-3Zn | 250 | 0.384 | 2.54a) | [1](#_ENREF_1) |
|  | SIFSIX-2-Cu-i | 735 | 0.515 | 5.41a) | [1](#_ENREF_1) |
|  | SIFSIX-2-Cu | 3140 | 1.305 | 1.84a) | [1](#_ENREF_1) |
| Zeolites | Zeolite 13X | 616 | 1.0 | 3.9a) | [2](#_ENREF_2), [3](#_ENREF_3) |
| Nitrides | MSIN-673 | 1009 | 2.3 | 2.6a) | [4](#_ENREF_4) |
|  | HTT600NH | 230 | 0.5 | 2.3b) | This work |
| Activated carbons | AC | 2994 | 2.35 | 2.1a) | [5](#_ENREF_5) |

a) CO2 adsorption at 298 K b) CO2 adsorption at 273 K

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