Supplementary Information

for

**Incorporation of Cu3BTC2 nanocrystals to increase the permeability of polymeric membranes in O2/N2 separation**

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**Figure S1** FTIR spectrum of **(a)** Matrimid 5218 and **(b)** Polysulfone Udel polymer



**Figure S2** TGA curves of **(a)** Matrimid and **(b)** polysulfone membranes containing

10 wt% and 20 wt% Cu3BTC2 nanocrystals



**Figure S3** Comparison of the performance of the studied polymer with the Robeson Upper Bound. The label “1” to “6” is indicated in Table below.

|  |  |
| --- | --- |
| **Membrane** | **Label** |
| **Polysulfone** | 1 |
| **Polysulfone + 10 wt% Cu3BTC2** | 2 |
| **Polysulfone + 20 wt% Cu3BTC2** | 3 |
| **Matrimid®** | 4 |
| **Matrimid® + 10 wt% Cu3BTC2** | 5 |
| **Matrimid® + 20 wt% Cu3BTC2** | 6 |