

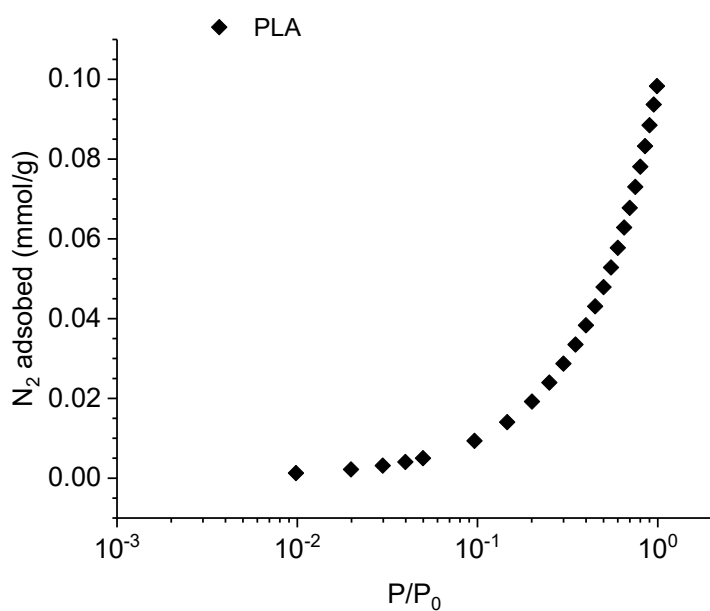
# Shaping of HKUST-1 via Extrusion for the Separation of CO<sub>2</sub>/CH<sub>4</sub> in Biogas

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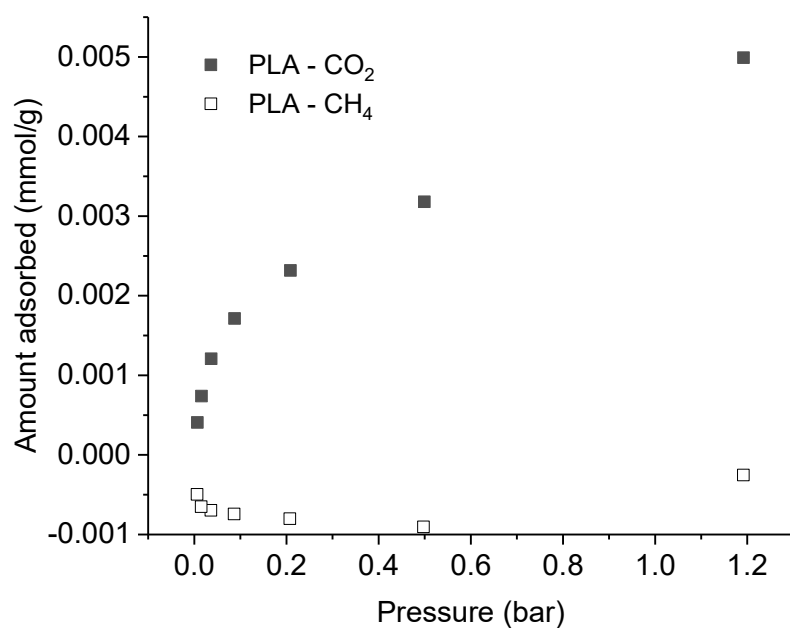
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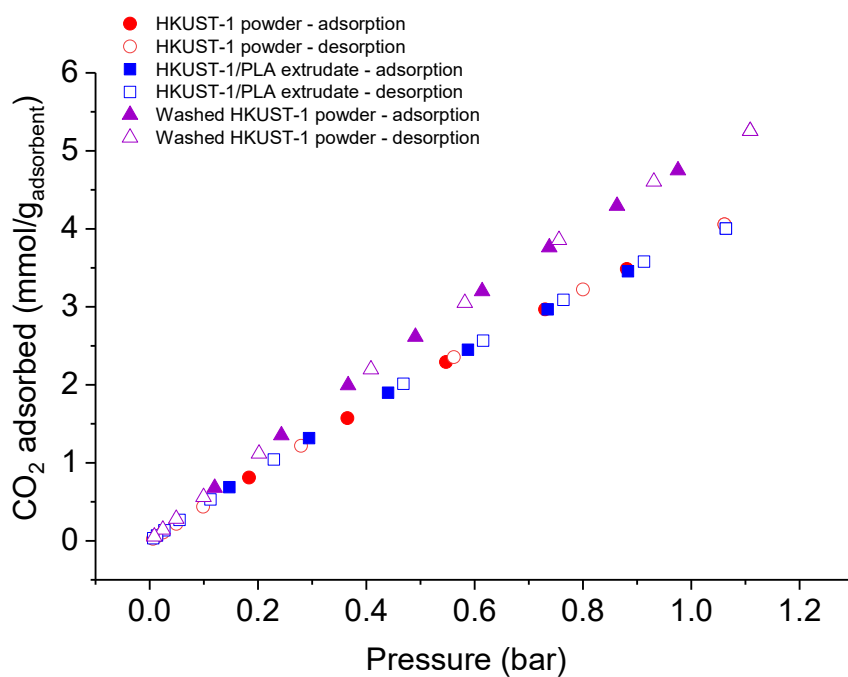
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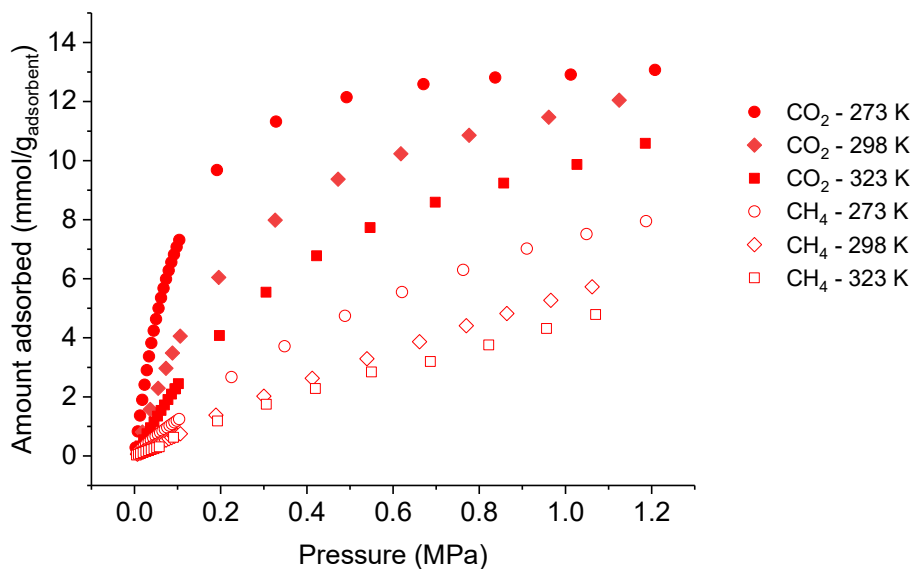
**Figure S1.** N<sub>2</sub> adsorption isotherm plot for PLA.



**Figure S2.** Gravimetric adsorption isotherms of CO<sub>2</sub> and CH<sub>4</sub> on PLA.



**Figure S3.** Gravimetric adsorption-desorption isotherms of CO<sub>2</sub> on HKUST-1 powder, HKUST-1/PLA extrudate and washed HKUST-1 powder.



**Figure S4.** Gravimetric adsorption isotherms of CO<sub>2</sub> and CH<sub>4</sub> for HKUST-1/PLA extrudate at 273 K, 298K and 323 K.

**Table S1.** BET Surface area, pore volume of PLA.

Sample	S <sub>BET</sub> (m <sup>2</sup> /g)	Micropore volume (cm <sup>3</sup> /g), <sup>a)</sup>	Total pore volume (cm <sup>3</sup> /g), <sup>b)</sup>
PLA	9	0	0

<sup>a)</sup> Micropore volume determined by applying t-plot method on N<sub>2</sub> adsorption data <sup>b)</sup> Total pore volumes were calculated from experimental N<sub>2</sub> sorption data at p/p<sup>0</sup>= 0.98