Supporting information

Stepwise Deposition of Metal Organic Frameworks on flexible synthetic Polymer Surfaces

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Reaction cell

![Reaction cell diagram](image)

**Figure S1.** Scheme of “Step-by-step” growth apparatus.
**EDX mapping**

**Figure S2.** EDX Cu mapping image of a synthetic polymer substrate after applying 40 deposition cycles of $[\text{Cu}_3(\text{btc})_2]_n$. The areas where copper was detected are imaged in red.

**FT-IR spectroscopic measurements of pyrazine loaded thin films**

**Figure S3.** FT-IR spectra of a $[\text{Cu}_3(\text{btc})_2]_n$ material (40 deposition cycles) deposited on flexible polymer surface before loading experiment with pyrazine (blue) and after the loaded experiment (green). The reference FT-IR spectrum of pyrazine is presented in red.
Figure S4. TG data of unloaded \([Cu_3(btc)_2]_n\) material (40 deposition cycles) deposited on flexible polymer surface (black line) and of the same material after loading with pyrazine (red line).