Supplementary Information Material

Long Range Structural and Textural Changes in [Zn(bdc)(ted)$_{0.5}$] upon Spontaneous Dispersion of LiCl and Hysteretic Adsorption and Desorption of Carbon Dioxide and Hydrogen

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1. Compositional Data

The ICP-MS tests yielded the following (in wt.%):

- \([\text{Zn(bdc)(ted)0.5}]: \text{C} 42.5, \text{H} 5.41, \text{N}: 7.57 \text{ and Zn} 16.0\)
- \((\text{LiCl})[\text{Zn(bdc)(ted)0.5}]: \text{C} 36.8, \text{H} 3.33, \text{N}: 3.21, \text{Zn} 19.1 \text{ and Li} 1.99\)

2. Additional Adsorption Data

![Graph of CO₂ adsorption-desorption isotherms at different temperatures in (LiCl)[Zn(bdc)(ted)0.5]](image)

**Figure S1.** Carbon dioxide adsorption-desorption isotherms at different temperatures in \((\text{LiCl})[\text{Zn(bdc)(ted)0.5}]\).
Figure S2. Hydrogen adsorption-desorption isotherms at different temperatures in (LiCl)[Zn(bdc)(ted)_{0.5}].