Supporting Information

Effect of organic linker substituents on properties of metal-organic frameworks: A review

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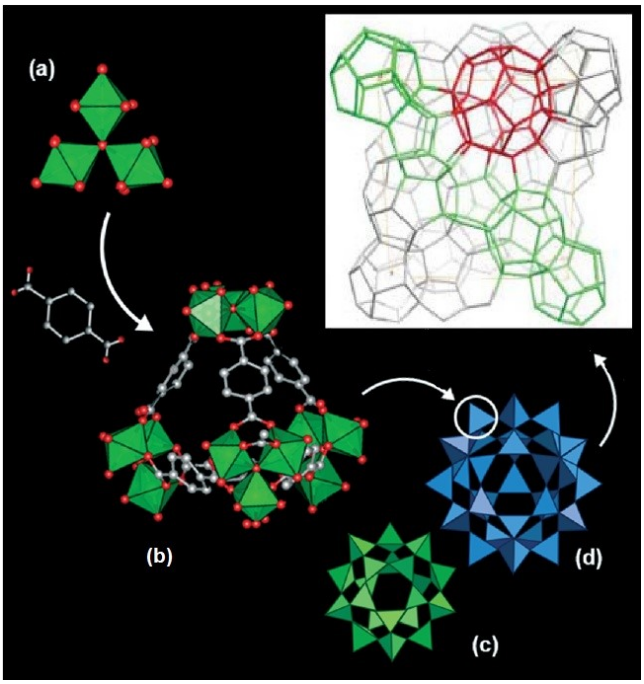

Figure S1. Structure of MIL-101. The inorganic node (a) linked by BDC to form supertetrahedra (b) (Me = green, O = red, C = grey). The linkage of these supertetrahedra delimits two cage sizes (c) and (d). Adopted with permission from Ref. [1].

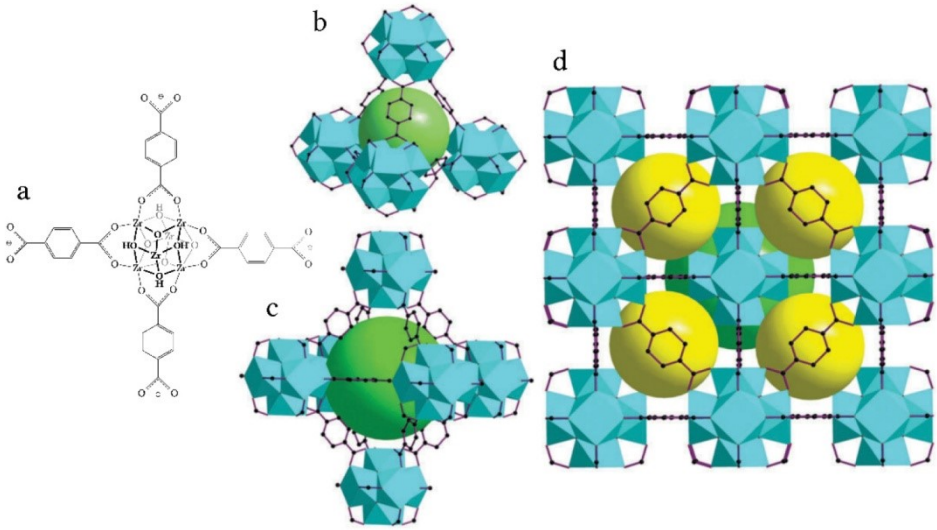

Figure S2. Structure of UiO-66. (a) Structure of the inorganic building units connected by 12 BDC linkers with formation of tetrahedral (b) and octahedral (c) cavities; (d) packing of two types of cavities. Reproduced with permission from Ref. [2].

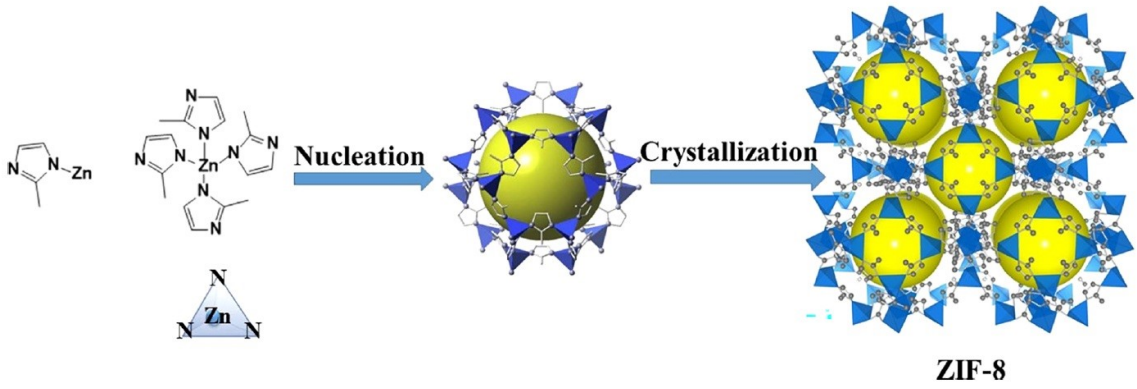

Figure S3. Schematic representation of formation of ZIF-8 structure. Reproduced with permission from Ref. [3].

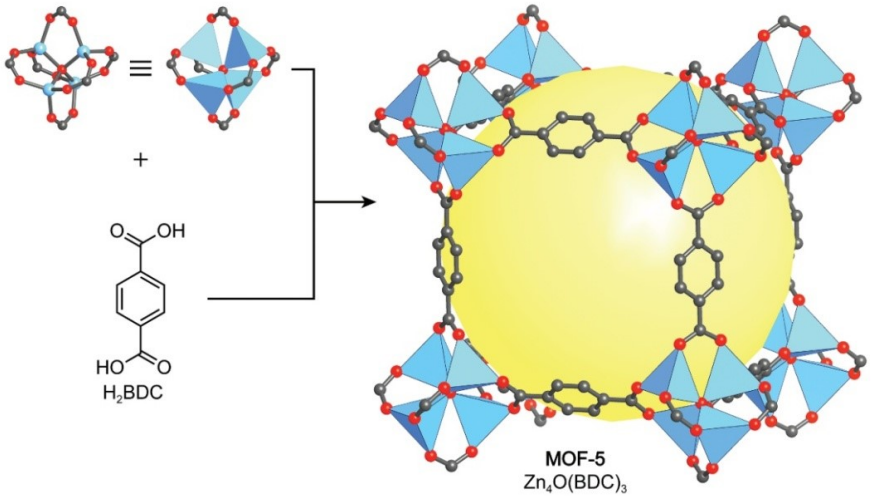

Figure S4. Structure of MOF-5 constructed from octahedral $Zn_4O(COO)_6$ SBUs and BDC linkers. All hydrogen atoms are omitted for clarity. Color code: Zn – blue, C – gray, O – red. Reproduced with permission from Ref. [4].

References

[1] J.N. Hall, P. Bollini, Structure, characterization, and catalytic properties of open-metal sites in metal organic frameworks, Reaction Chemistry & Engineering. 4(2) (2019) 207-222.

[2] V.G. Ponomareva, E.S. Shutova, K.A. Kovalenko, V.P. Fedin, 2022. New type of nanocomposite CsH2PO4-UiO-66 electrolyte with high proton conductivity. Molecules, 27(23), 8387.

[3] M.R. Ahmadian-Yazdi, N. Gholampour, M. Eslamian, Interface engineering by employing zeolitic imidazolate framework-8 (ZIF-8) as the only scaffold in the architecture of perovskite solar cells, ACS Applied Energy Materials. 3(4) (2020) 3134-3143.

[4] O.M. Yaghi, Emergence of Metal-Organic Frameworks, chap. 1, 1–27 (Wiley, 2019). https://onlinelibrary.wiley.com/doi/pdf/10.1002/9783527821099.ch1.