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SYNFACTS Highlights in Chemical Synthesis

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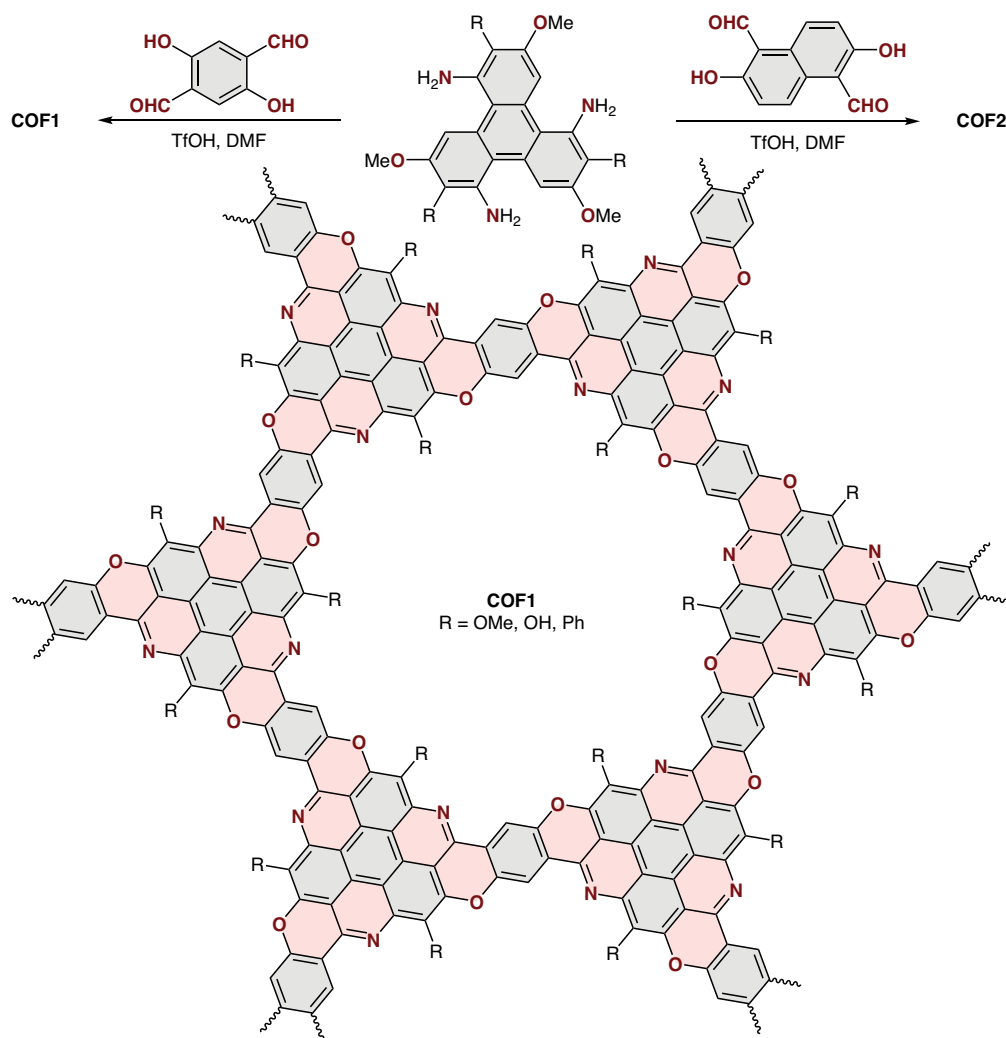
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Functionalized Graphene via a One-Pot Reaction Enabling Exact Pore Sizes, Modifiable Pore Functionalization, and Precision Doping
J. Am. Chem. Soc. **2024**, *146*, 33056–33063, DOI: 10.1021/jacs.4c10529

Graphene-Like Covalent Organic Frameworks



Significance: Although having mostly ordered 2-dimensional lattices, the rotational motions of the single bonds would cause non-negligible defects in covalent organic frameworks (COFs). Here, a set of graphene-like functionalized COFs with uniform pores are realized.

Comment: By harnessing the highly effective one-pot, four-step tandem Pictet–Spengler reaction, a series of COF materials composed of all-fused pyranoazacoronene, void of single-bond linkage in the two-dimensional scaffold, are accomplished.