

*Salen-based crystalline covalent organic framework*

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Covalent Organic Frameworks (COFs) represent an emerging class of crystalline porous organic materials that are constructed with purely organic building blocks through strong covalent bonds. Due to their low density, high stability, large surface area, and diverse functions, COFs have shown great potentials in diverse applications. Taking the advantage of the structural uniqueness, we achieved the one-step construction of Salen-functionalized crystalline covalent organic framework (COF). The synthesized Salen-based COF material, LZU-Salen, possesses high crystallinity and excellent stability. Moreover, LZU-Salen can work as a versatile host for metalating various metal ions and the obtained metallosalen-based COF identified its efficient activity in heterogeneous catalysis. The results not only provide a general strategy for the concise synthesis of Salen-based COFs, but also highlight the application of Salen-functionalized crystalline materials.

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[2] Ding, S.-Y.; Wang, W. (2013). *Chem. Soc. Rev.* 42, 548.

**Keywords:** [Covalent Organic Framework](#), [Salen-functionalized crystalline materials](#)