







Short communication

Enhancing the synthetic routes to prepare MIL-96(Al) and their efficiency for CO₂ capture

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Highlights

- Improvements in the synthesis of aluminum metal–organic framework.
- Optimization of solvothermal and green routes.
- The solvothermal synthesis avoids the use of modulators.
- Production of hexagonal bipyramid-shaped crystals.
- Carbon dioxide performance and adsorption enthalpy.

Abstract

Synthetic routes to produce metal–organic frameworks (MOFs) utilizing a sustainable method and the smallest amount of toxic organic solvents are desirable to avoid problems associated with chemical waste liquids. Herein, we report the synthesis of an aluminum trimesate-based MOF, MIL-