

## Review on the current practices and efforts towards pilot-scale production of metal-organic frameworks (MOFs)

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### ABSTRACT:

Metal-organic frameworks (MOFs) have been under development over the past 20 years. Similar to other technologies, research on MOFs in the upcoming 30 years will move towards the direction where MOF materials can deliver societal benefits by solving real-world problems. Taking technology from laboratory to applications is always a challenge. Analysis of the current MOFs research efforts indicates that the high cost, limited availability of MOF products and the knowledge gap for cost-effective production technologies account for the slow progression towards the development of envisioned MOF products at pilot-scale level. This short review brings together the scattered literature that addresses pilot-scale production of MOF materials. An additional aspect focuses on the progress on the development of pilot-scale synthetic strategies with green and sustainable features for MOF materials, which is an imperative to promote MOF-enabled products into the real world.