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Bimetallic metal-organic frameworks nanocages as multi-functional fillers for water-selective membranes

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ABSTRACT: Although metal-organic frameworks (MOFs) with well-defined regular and porous structure have emerged as a family of nanoporous building blocks, the great potential of MOFs as multi-functional fillers for hybrid membranes deserves in-depth exploitation. In this study, bimetallic MOF nanocages, Fe^{III}-HMOF-5, were prepared and incorporated into sodium alginate (SA) matrix to fabricate water-selective nanohybrid membranes. Introduction of Fe^{III} ions into MOF-5 creates more coordinatively unsaturated sites, which leads to preferential dissolution of water

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