

Synthesis of Functionalized Porous Organic Polymers (F-POPs) by Natural Aldehyde: Removal of Heavy Metals from Wastewater Application

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Covalently bonded organic polymers are a new field of functional polymers that have attracted many chemists to date. Because of the comparable surface area, the absence of metal ions in the structure, and the flexibility of molecular design by the synthesis strategy of polymers and organic chemistry, these materials are potential applications for gas separation/storage, heterogeneous catalysts, chemical sensing and heavy metal adsorption. We synthesized porous organic polymers (POPs) which have aminal linkages, constructed by some kind of monoaldehydes and melamine. These POPs were functionalized by thiol-containing molecules, and the materials were applied to remove heavy metal ions from wastewater.