

Synthesis of Hierarchical POP(Porous Organic Polymer) with Melamine and Terephthalic acid

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Melamine based amine containing POP (Porous Organic Polymer) have been a research of interest. Due to its nitrogen rich character it has been exploited in a wide range of applications like base catalysis, carbon dioxide capture and storage, separation materials etc. In the present study a novel Amide functionalized melamine polymers have been synthesized using Melamine and Terephthalic acid monomers in a chain-growth polymerization process. Boric acid was used as a Lewis acid catalytic system for catalyzing the Amine-Acid couplings. The obtained polymers were amorphous in nature and exhibited hierarchical pore structure. The obtained Amide POP materials were characterized using, XRD, SEM, BET, FT-IR analysis.