

CO₂ Adsorption Behavior of Melamine Resins

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For the carbon dioxide and capture (CCS) especially in the post-combustion sources, the development of economic and stable solid amine has been challenged for the lower consumption of power for the separation of CO₂ and commercial viability of solid amine as well. Recently, acidic CO₂ could be activated and captured by basic nitrogen containing molecules¹ and organic amine containing porous materials as solid amine sorbent. Here, melamine resins³ as the nitrogen functionalized porous polymers were designed and synthesized² for the CO₂ adsorption. The melamine resins with micro- and meso-pore were synthesized and tested CO₂ adsorption behavior.