

CO₂ Adsorption Using Polymer Composite Film

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The development of mechanically stable membrane for carbon dioxide adsorption from the atmosphere and a lot of industry is still big issue. Here , we present the preparation of polymer composite membranes using several mesoporous materials and commercial polymers. Mesoporous materials have shown outstanding features in carbon dioxide capture. However materials itself have the limit to any different and harsh working conditions. We prepared a kind of thin films using several mesoporous materials and polymers to be used for further applications. The homogeneous thin films were prepared using SAN (styrene-co-acrylonitrile) copolymer and dichloromethane as a solvent by a facile solvent casting method. Carbon dioxide adsorption was analyzed using TGA (thermogravimetric analysis) microbalance.