عنوان مقاله:

Advance polymeric membrane to CO2 separation

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خلاصه مقاله:

Global CO2 emissions have increased steadily due to use of fossil fuels and industrial applications. Therefore, it isnecessary to decrease of energy consumption and CO2 concentration by CO2 separation from natural gas. There aredifferent technologies to CO2 separation. CO2 separation membranes prepared by green, simple, and efficient methodshave faced great challenges. In recent years, Polymer based membrane materials be applied in vast variety of themembrane materials. Polymeric membrane materials show high permeability to CO2. But having excellent selectivityshould be considering to prepare polymeric membranes. This review summarizes advances in polymeric materialshaving very high CO2 permeability and excellent CO2/N2 selectivity that enhance the performance of polymericmembranes. Five important classes of polymer membrane materials are highlighted: polyimides, thermally rearrangedpolymers (TRs), substituted polyacetylenes, polymers with intrinsic microporosity (PIM) and poly (ethylene .oxide)(PEO) that are high performance to CO2 separation

کلمات کلیدی:

polymeric membrane; CO2 separation; gas transport properties; gas separation membrane