

Separation of ethylene, propylene from C₂, C₃ mixture using facilitated olefin transport membranes

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In the petrochemical industry, the separation of olefin and paraffin gases is an important process. Currently olefin/paraffin separation is mainly carried out by low-temperature distillation, This technique requires high investment and operating costs. The use of facilitated olefin transport membranes technology is nowadays considered to be a promising and energy efficient alternative. Recently, silver-based facilitated transport membranes using materials such as polymers and ionic liquids were investigated for application in the separation processes of olefin/paraffin mixtures. The performance of facilitated transport membranes were prepared and tested for separation of the ethylene/ethane and propylene/propane mixtures.