

عنوان مقاله:

Review of Membranes for Hydrogen Purification

محل انتشار:

هفتمین کنفرانس بین المللی مهندسی شیمی و نفت (سال: 1400)

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خلاصه مقاله:

Non-renewable nature, associated pollution, and limited resources of fossil fuels, have motivated researchers and industries toward clean and renewable energy sources. Hydrogen has emerged as a potent clean energy source with zero environmental footprints. Several petrochemical reactions produce hydrogen; however, separation, and purification of hydrogen requires additional effort. In this review, metallic, ceramic, polymeric and carbonic membranes used for hydrogen separation are discussed and the effects of their physicochemical properties, separation mechanisms, and operational requirements for hydrogen separation from different feedstocks are elucidated.

کلمات کلیدی:

Clean energy, Hydrogen Separation, Membrane, Membrane reactor, Transport Mechanism

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