عنوان مقاله:

Review of Hydrocarbon Dehydrogenation via Membrane Reactors

محل انتشار:

هشتمین کنفرانس بین المللی شیمی ، مهندسی شیمی و نفت (سال: 1399)

تعداد صفحات اصل مقاله: 8

نویسندگان:

Mojtaba Binazadeh - *Assistant Professor, Chemical Engineering Department, School of Chemical and Petroleum Engineering, Shiraz University, Shiraz, Iran*

Roham Sohrabi - *MSc Student, Chemical Engineering Department, School of Chemical and Petroleum Engineering, Shiraz University, Shiraz, Iran*

خلاصه مقاله:

Dehydrogenation of hydrocarbons such as ethylbenzene to styrene and ethane to ethylene are widely performed in petrochemical industries to produce industrially relevant value-added products. Hydrogen, the by-product of dehydrogenation reactions, is considered as an ideal clean energy carrier with zero environmental footprint which does not cause any greenhouse gas emission upon burning. Increasing conversion of reversible and equilibrium limited dehydrogenation reactions via membrane reactors can be achieved by selective and distributed hydrogen separation from the reactor. In this review applicability of membrane reactors for dehydrogenation reactions are discussed and their added-values are explained.

کلمات کلیدی:

Dehydrogenation, Hydrogen Production, Hydrogen Separation, Clean Energy, Membrane Reactor