

عنوان مقاله:

Integration of oxidative coupling of methane (OCM) and dehydrogenation of ethane for enhancement of C₂H₄ yield over Mn-Na₂WO₄/SiO₂ catalyst

محل انتشار:

ششمین کنگره بین المللی مهندسی شیمی (سال: 1388)

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خلاصه مقاله:

Oxidative coupling of methane is considered to be one of the direct routes in natural gas conversion into more added value hydrocarbons. In this work, an integrated process, comprising OCM and dehydrogenation of ethane, for improving the C₂H₄ yield is introduced. The reactions are performed in a vertical quartz reactor having two reaction parts which operates at ambient pressure. The best results are obtained when OCM reactions take place on Mn-Na₂WO₄/SiO₂ catalyst located in the upper reaction part followed by noncatalytical reactions performed in the second reaction part at CH₄/O₂=7/1 and 800°C. The operation led to a maximum C₂H₄ selectivity and ethylene yield of 37.9% and 16.0% respectively.

کلمات کلیدی:

methane; OCM; Mn/Na₂WO₄/SiO₂; ethylene

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