

Combined a supported catalyst with plasma reactor for CO₂ reforming of CH₄

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CO₂ reforming of CH₄ to syngas has been interested because of consuming two greenhouse gases and producing the valuable products. Traditionally, CO₂ reforming of CH₄ was performed by metal catalyst with high-temperature operation. The high-temperature operation presented that the process is high-energy cost and high cost of equipment. In addition, easy deactivation of catalyst by the carbon deposition on the surface of catalyst is main disadvantage of the method. In this study, CO₂ reforming of CH₄ can be performed by combining a supported catalyst with a plasma reactor located in oil at ambient atmospheric pressure. Several of factors in the process will be considered such as temperature operation, feed gases and voltage. The parameters were considered with aspects to reactant conversion, selectivity of products