

메탄의 부분산화반응으로부터 수소제조를 위한 기공성 촉매담체 제조

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The catalyst carriers, SBA-15, the layer compounds such as the silica-pillared H^+ -kenyaite (SPK) and H^+ -magadite (SPM) were prepared for partial oxidation of methane (POM) to hydrogen. The adsorption isotherm of SBA-15 was the type IV that the mesopores were well developed with hysteresis. The BET surface area and BJH adsorption average pore diameter were $931 \text{ m}^2/\text{g}$ and 30 \AA , respectively. The BET surface area and the Horvath-Kawazoe pore distributions of SPM and SPK were $810 \text{ m}^2/\text{g}$ and 2.6 nm for SPM and $760 \text{ m}^2/\text{g}$ and 3.0 nm for SPK. The adsorption isotherm of SPM and SPK also were the type IV well defined. The TEMs of SPM and SPK showed the layer compounds of narrow well formed. It proposed that the the carriers made by our method could be used for partial oxidation of methane (POM) to hydrogen.