TiO_2 Coating on Zeolite Particles by Mechanical Milling Technique for CO_2 Reforming Process

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In this study, the TiO_2 coating on zeolite beads by mechanical coating technique was investigated and characterized by XRD and SEM. The SEM results showed the distribution of TiO_2 on the surface of zeolite particles. The influence of the rotation speed of planetary ball mill on the evolution and formation of the coatings was also investigated. The results indicated that continuous TiO_2 coatings can be formed under a moderate rotation speed and amount of TiO_2. In other works, the zeolite beads after coating have been applied to the CO_2 reforming of CH_4 to syngas by the dielectric barrier discharge process. The results of gas chromatography showed the increasing of conversion and selectivity by the effect of TiO_2 on the CO_2 reforming reaction