

Preparation of Metal Catalysts with SiC Core of High Thermal Conductivity

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Recently there has been growing interest in SiC ceramic materials which have unique characteristics such as high conductivity ($490 \text{ Wm}^{-1}\text{K}^{-1}$) and melting point ($2730 \text{ }^\circ\text{C}$). However, various core-shell catalysts except catalysts including Si such as SiC@SiO₂ were not studied, thus it was tried to form core-shell catalysts with a variety of composition. It was tried to coat the SiC surface with Al(OH)₃ and NiAl-LDH (Layered double hydroxide) which change to SiC@Al₂O₃ and Ni/SiC@Al₂O₃ after calcination and reduction, respectively.