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## Supported Catalyst(Cu/ZnO) for the Methanol Synthesis

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The Cu/ZnO system is the basis of industrial methanol synthesis and important component of fuel-cell technologies. We have made the ternary system Cu/ZnO/Al<sub>2</sub>O<sub>3</sub> nanotube by CVD method. We present a synthetic approach toward alloyed Cu/ZnO nanoparticles in the Al<sub>2</sub>O<sub>3</sub> nanotube using [Cu(OCH(Me)CH<sub>2</sub>NMe<sub>2</sub>)<sub>2</sub>] and Et<sub>2</sub>Zn as precursors. The Cu/ZnO/Al<sub>2</sub>O<sub>3</sub> nanotubes are analyzed by using TEM and EDX. These analytical data suggest that alloying between zinc and copper takes place, revealing crystalline phase of copper nanoparticles(2~3nm) deposited onto ZnO.