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Growth of copper particles in a Cu/ZnO methanol catalyst

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Abstract

The growth and coarsening of copper particles in a Cu/ZnO catalyst powder is evaluated through transmission electron microscopy and associated composition maps. The observed growth rate of discrete copper particles on the zinc oxide support structure follows a parabolic shape, with measured particle diameter $d \propto t^{(1/2)}$.

Keywords: Copper; Scanning/transmission electron microscopy (STEM); Coarsening; High-angle annular dark field imaging (HAADF); Catalysis