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## Promoting role of bismuth on carbon nanotube supported platinum catalysts in aqueous phase aerobic oxidation of benzyl alcohol

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### Highlights ►

► Microwave assisted reduction is effective to make Bi-promoted Pt catalysts. ► Close contact between Bi and Pt affords enhanced catalytic activity in aerobic oxidation. ► Activation of both oxygen and alcohol is remarkably improved by Bi promoters. ► Amorphous and crystalline Bi species perform differently over Bi-Pt/CNT catalyst. ► One-pot synthesis of bimetallic Bi-Pt catalyst affords the most efficient catalyst. ► ►

Graphical abstract

Abstract

PtBi/CNT catalyst was synthesized by a one-step polyol reduction method assisted by microwave radiation, and its catalytic performance was investigated in aerobic oxidation of

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