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**Study of catalytic activities of
nanostructure copper and cobalt
supported ZSM-5 catalysts for
conversion of volatile organic
compounds**

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Abstract: This paper reports the comparison of the activities of nanostructure Cu-ZSM-5 and Co-ZSM-5 catalysts for conversion of ethyl acetate and toluene and deals with the relationship between activity and structure of catalysts. The catalysts were characterized by ICP-AES, XPS, EDX, XRD, SEM, and TEM techniques. Catalytic studies were carried out under atmospheric pressure and in a temperature range of 200-500 °C. Cu-ZSM-5 catalysts showed better activity than Co-ZSM-5, revealing higher activity of copper cations. The higher activity was ascribed to higher electronegativity, smaller cation radius, good