

Abstract

This application provides a catalyst for producing paraxylene by co-conversion of methanol and/or dimethyl ether and C₄ liquefied gas, and preparation and application thereof. The catalyst is an aromatization molecular sieve catalyst with a shape-selective function co-modified by bimetal and siloxane compound. Methanol and/or dimethyl ether and C₄ liquefied gas are fed in reactor together, wherein aromatization reaction occurring on a modified shape-selective molecular sieve catalyst. The yield of aromatics is effectively improved, in which paraxylene is the main product. In products obtained by co-conversion of methanol and/or dimethyl ether and C₄ liquefied gas, the yield of aromatics is greater than 70wt%, and the content of paraxylene in aromatics is greater than 80wt%, and the selectivity of paraxylene in xylene is greater than 99wt%.