

Abstract

A catalyst for oxidative coupling of methane, a preparation method thereof and an application thereof. The components of the catalyst comprise: a manganese sesquioxide, a tungstate, a manganese composite oxide having a perovskite structure and/or a spinel structure, and a carrier, wherein the manganese sesquioxide, the tungstate, the manganese composite oxide having a perovskite structure and/or a spinel structure are supported on the carrier, or the manganese sesquioxide and the tungstate are supported on the admixture of the said manganese composite oxide having a perovskite structure and/or a spinel structure and the said carrier, wherein, based on 100 parts by weight of the catalyst, the content of the manganese sesquioxide is a parts by weight, the content of the tungstate is b parts by weight, the content of the manganese composite oxide having the perovskite structure and/or the spinel structure is c parts by weight, and the content of the carrier is d parts by weight, and wherein $0 < a \leq 20$, $1 \leq b \leq 20$, $1 \leq c \leq 40$, $20 \leq d < 98$. When applying to oxidative coupling of methane, the catalyst has excellent activity and selectivity at low temperature.

To be published with FIG. 1.