



## 一种用于合成气转化制取甲烷并联产油品的铁基催化剂、其制备和应用

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**是否PCT专利** 否

**中文摘要** Provided are a catalyst for applied to producing methane and co-producing petroleum products by converting syngas and process conditions for preparing the catalyst and producing the methane and the co-producing the petroleum products by converting the syngas. The catalyst is composed of ABFeO, the active component is ferric oxide, and the total content of ferrum accounts for 35.0-75.0wt% of the total weight of the catalyst. A promoter A is lithium (Li), sodium (Na), kalium (K), zinc (Zn) and/or zirconium (Zr), and the content of the promoter A accounts for 0.10-5.0wt% of the total weight of the catalyst. A promoter B is cuprum (Cu) and/or manganese (Mn), and the content of the promoter B accounts for 0.5-10.0wt% of the total weight of the catalyst. The preparation of the catalyst adopts a coprecipitation method, and the catalyst is obtained by aging, drying and roasting the precipitate. The promoter A is introduced into the roasted catalyst through an immersion method, and then the final catalyst with 20-40 meshes is obtained through drying, roasting and pelleting. The syngas serving as a raw material is wide in source and can be obtained from coal or biomass. The catalyst is low in cost, simple in preparation process, high in reaction activity and suitable for continuous large-scale production. | 一种经合成气制甲烷并联产油品反应应用催化剂、其制备及合成甲烷并联产油品工艺条件。催化剂组成为ABFeO，活性组分为氧化铁，铁的总含量为催化剂总重量的35.0-75.0wt%；助催化剂A为Li, Na, K, Zn, Zr, 含量为催化剂总重量的0.10-5.0wt%；助催化剂B为Cu, Mn, 含量为催化剂总重量的0.5-10.0wt%。催化剂的制备采用共沉淀法，所得沉淀经老化、干燥、焙烧得到。助催化剂A通过浸渍法引入焙烧后的催化剂，然后再进行干燥、焙烧、造粒，得到20-40目的最终催化剂。本发明的原料为合成气，其来源广泛，既可从煤也可从生物质得到。催化剂成本低廉，制备过程简单，反应活性很高，适合连续大规模生产。

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