

研究论文

载体TiO₂对Co-P非晶态合金性质的影响

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摘要 用还原沉积法分别合成了纯态Co-P非晶态合金和一种新型负载非晶态合金催化剂CoP/TiO₂, 用XRD, ICP, TEM, BET和DSC等手段对催化剂的物理性质进行了表征, 比较了它们的结构、组成、形貌、表面积及热稳定性等物理性质及其对PH₃分解的催化活性. 与纯态Co-P非晶态合金比较, CoP/TiO₂具有更大的表面积和较高的热稳定性及催化活性, 这缘于TiO₂载体与催化剂的相互作用以及载体对Co-P良好的分散性能.

关键词 [非晶态合金](#) [钴磷合金](#) [TiO₂](#) [负载型催化剂](#)

分类号

Effect of Support TiO₂ on the Characteristics of Co-P Amorphous Alloy

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Abstract Co-P amorphous alloy and a new supported Co-P amorphous alloy catalyst CoP/TiO₂ were prepared respectively by reduction-chemical deposition method. The physical properties of the alloy catalysts were characterized by XRD, ICP, TEM, BET and DSC. The structure, composition, shape, surface area and thermal stabilities of Co-P and CoP/TiO₂ were compared. Besides, their catalytic activities for PH₃ decomposition were compared, too. Compared with Co-P particles, CoP/TiO₂ has bigger surface area, higher thermal stability and catalytic activity, which was attributed to interaction of TiO₂ support and catalyst and high dispersion of Co-P alloy particles on the support of TiO₂.

Key words [amorphous alloy](#) [Co-P alloy](#) [titania](#) [supported catalyst](#)

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