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催化、动力学与反应器

MCM-41分子筛固载羧基钯（Ⅱ）配合物催化剂的制备、表征和催化性能（Ⅰ）
催化剂的制备与表征

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摘要

合成了一系列新的MCM-41分子筛固载羧基钯（Ⅱ）配合物催化剂，并利用XRD、XPS、FT-IR和FT-Raman等技术对催化剂进行了表征。研究表明，MCM-41分子筛表面的Si—OH基可与三乙氧基硅烷类化合物发生作用，合成了表面羧基功能化的介孔MCM-41材料。 MCM-41分子筛在有机功能化过程中虽然其比表面积、孔容和平均孔径有所减少，但其孔结构未被破坏。MCM-41分子筛载体上的—COOH配体通过与Pd(OAc)2中OAc基的交换反应而与Pd2＋发生配位。

关键词

MCM-41分子筛 有机功能化 羧基钯配合物

分类号

Preparation and characterization of MCM-41 supported carboxyl Pd(Ⅱ)complex catalysts and their catalytic performance(Ⅰ)Preparation and characterization of catalysts

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Abstract

A series of new carboxyl Pd（Ⅱ）complexes were prepared from organic silica via immobilization on MCM-41 molecular sieve, and characterized with XRD, XPS, FT-IR and FT-Raman techniques.The results showed that —COOH groups could be immobilized on the MCM-41 surface via a reaction of the silanol groups with oxyalky-silane compounds, and the organically modified MCM-41 materials retained its hexagonally-packed porous structure during supporting organic species, but internal surface area and pore diameter of the materials decreased markedly.The direct binding to silica surfaces was achieved by direct ligands exchange of MCM-41 supported caboxylate group ligands with Pd(OAc)2.

Key words

MCM-41 molecular sieve organic functionalization carboxyl Pd complex

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