

## عنوان مقاله:

Synthesis of Pt/Pd/Bi Nanoparticles in MCM-41 Host under Alkaline Conditions, and It's Characterization

## محل انتشار:

دومین کنگره بین المللی علوم و فناوری نانو (سال: 1387)

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## خلاصه مقاله:

In 1992, Mobil scientists first reported the synthesis of mesoporous silicate molecular sieves (M41S), of which hexagonal MCM-41 and cubic MCM-48 are representatives, by using micelles as pore-forming templates under hydrothermal conditions (100–150°C)[1]. Synthesis and application of heteroatoms-containing mesoporous silicate has attracted great interest in material science. There have been many reports concerning the incorporation of transition metals and some main group elements such as B, Ga, In, etc. into the wall of MCM41 by direct synthesis, ion exchange or impregnation method. Incorporation of heteroatoms into the framework or onto the wall of mesoporous silicate can increase the amounts of defects, the acidity or basicity, the redox property, and thus improve the catalytic ability of silicate [2]. Some of these materials had high catalytic activities in the selective oxidation, epoxidation, alkylation, isomerization, hydrosulfurization and hydrocracking of organic compounds. Most of the reports in the literature were focused on mesoporous molecular sieves incorporated with monokind of metal in last decades, only a few researches were concerning with the synthesis and application of binary and/or trinary heteroatoms containing mesoporous silicate, mostly due to the hard control of the simultaneous hydrolyzation of multi-kind of metal and silicon species. Multi-component incorporation can modify the surface properties of mesoporous silicate more effective than mono-kind of heteroatom incorporation and could be widely used in catalytic field [3]. Platinum, palladium and bismuth together constitute the active phase of the catalyst for oxidation of glucose to gluconic acid

## کلمات کلیدی:

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