

## عنوان مقاله:

Ni(II)- Carboxamide complex coated CoFe<sub>2</sub>O<sub>4</sub> nanoparticles as high reusable catalyst for the oxidation of sulfides and oxidative coupling of thiols

## محل انتشار:

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## خلاصه مقاله:

Using magnetic nanoparticles as catalyst recyclability, fast, simple, effective and efficient catalyst recovery from the reaction mixture is possible without the need to lengthy, cumbersome and expensive centrifuge by using an external magnet. In addition to ease of isolation, this method increases the efficiency of catalyst recovery process, improving the purity of the products and high environmental and economic benefits will be rewarded. This is caused the magnetic nanoparticles be useful and practical tools in pharmaceutical, biotechnology and catalysis. Herein, new Ni(II)@Carboxamide complex immobilized on CoFe<sub>2</sub>O<sub>4</sub> nanoparticles has been reported as a recoverable nanocatalyst for the oxidation of sulfides to sulfoxides and oxidative coupling of thiols into corresponding disulfides under mild conditions (Scheme 1). This organometallic catalyst was recovered by an external magnetic from the reaction mixture and reused for five continuous cycles without noticeable change in its catalytic activity. The newly .magnetic nanoparticles were investigated with Elemental analysis FT-IR ,TGA, SEM ,VSM ,XRD and EDX techniques

## کلمات کلیدی:

nanocatalyst, sulfoxides, Carboxamide

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1009647>

