عنوان مقاله:

Copper-cysteine coated on magnetic layered double hydroxide nanoparticles: A new convenient catalysis system to click chemistry reaction in choline azide

محل انتشار:

دومین کنفرانس کاتالیست انجمن شیمی ایران (سال: 1398)

تعداد صفحات اصل مقاله: 1

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خلاصه مقاله:

Procedures of Click chemistry are powerful method for the synthesis of substituted triazole therefore have attracted an enormous amount of interest in modern chemistry. Click Chemistry is a term that was proposed firstly by Sharpless and co-workers in 2001. [1]The Huisgen [3 + 2]-cycloaddition of organic azide and alkynes resulting in substituted 1, 2, 3-triazoles is one of the most powerful click reactions [3] which is green chemistry approach because of high yielding, simple to perform, wide in scope, using green solvents, a fast and highly efficient reactions. [2] A novel and effective catalysis system, copper combined with cysteine, which is anchored in magnetic layered double hydroxide nanoparticles were designed and applied to synthesize triazole. This catalyst permits the preparation of triazole derivatives (click chemistry) by reaction of a benzyl halide with alkyne in the presence of choline azide. The catalyst can be recovered and recycled. The catalysis was investigated with useful analyses such as FT-IR, TGA, VSM, SEM, TEM, XRD, and ICP

کلمات کلیدی:

Layered Double Hydroxide, Choline Azide, Click Chemistry, Magnetic Catalyst, Triazole