

## عنوان مقاله:

Nanocrystalline SiO<sub>2</sub>-HClO<sub>4</sub>: A novel, efficient and green catalyst for the three-component synthesis of pyrimidine derivatives

## محل انتشار:

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## نویسندگان:

Mahdieh Chegeni - *Ayatolah al ozma bourojerdi*

Ardeshir Khazaei - *Faculty of Chemistry, Bu-Ali Sina University, P.O. Box ۶۵۱۷۸۳۸۶۸, Hamedan, Iran*

Shahnaz Saednia - *Young Researchers & Elites Club, Toyserkan Branch, Islamic Azad University, Toyserkan, Iran*

## خلاصه مقاله:

Nanocrystalline SiO<sub>2</sub>-HClO<sub>4</sub>, as a newly reported catalyst, has been used as an efficient and reusable catalyst for the synthesis of pyrimidine derivatives. The procedure can be successfully applied to the efficient synthesis of mono substituted pyrimidine derivatives, using triethyl orthoformate, ammonium acetate, methyl ketone derivatives. In practice, this method is a combination of a satisfactory synthesis and more significantly easy product isolation and purification. A simple, high yielding in the presence of perchloric acid-functionalized silica nanosphere as a catalyst is described. The catalyst could be used at least five times without any change in the activity. Full characterization of the catalyst was performed by XRD, EDX, UV-Vis, TGA spectra and also by SEM and TEM images

## کلمات کلیدی:

three-component reaction, pyrimidine derivative, perchloric acid-functionalized silica nanosphere, methyl ketones

## لینک ثابت مقاله در پایگاه سیویلیکا:

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