

## عنوان مقاله:

Nano-N,N,N',N'-tetramethyl-N-(silica-n-propyl)-N'-sulfo-ethane-1,2-diaminium chloride as an efficient and recyclable catalyst for the green synthesis of 3,4-dihydropyrimidin-2-(1H)-ones/thiones

## محل انتشار:

نشریه آسیایی شیمی سبز، دوره 5، شماره 1 (سال: 1400)

تعداد صفحات اصل مقاله: 11

## نویسندگان:

Roghayyeh khanivar - Department of Chemistry, Payame Noor University, PO Box ۱۹۳۹۵-۳۶۹۷ Tehran, Iran

Abdolkarim Zare - Department of Chemistry, Payame Noor University, PO Box ۱۹۳۹۵-۳۶۹۷ Tehran, Iran

Masoud Sadeghi-Takallo - Department of Chemistry, Payame Noor University, PO Box ۱۹۳۹۵-۳۶۹۷ Tehran, Iran

## خلاصه مقاله:

In this work, efficient and high-yielding green synthesis of 3,4-dihydropyrimidin-2-(1H)-ones and 3,4-dihydropyrimidin-2-(1H)-thiones was achieved by a one-pot three-component reaction between aldehydes, ethyl acetoacetate, and urea/thiourea, using a recyclable mesoporous nanocatalyst entitled nano-N,N,N',N'-tetramethyl-N-(silica-n-propyl)-N'-sulfo-ethane-1,2-diaminium chloride (nano-[TSPSED])[Cl]<sub>2</sub>). High yields, short reaction times, solvent-free conditions, easy purification of the products, compliance with green chemistry protocols and recyclability of the catalyst are the benefits of this work. The products were obtained in 80-98 % yields and in 10-45 min

## کلمات کلیدی:

Nanocatalyst Nano-N,N,N',N'-tetramethyl-N-(silica-n-propyl)-N'-sulfo-ethane-1,2-diaminium chloride (nano-[TSPSED])[Cl]<sub>2</sub> 3,4-Dihydropyrimidin-2-(1H)-one 3,4-Dihydropyrimidin-2-(1H)-thione, Solvent-free

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1142013>

