

## عنوان مقاله:

One-pot synthesis of ۱,۴-dihydropyridine derivatives using nano-cerium oxide as an efficient catalyst

## محل انتشار:

نشریه آسیایی شیمی سبز, دوره 5, شماره 4 (سال: 1400)

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## خلاصه مقاله:

Dihydropyridine derivatives have been identified as calcium channel blockers and are predominantly utilized in cosmetics and pharmaceuticals. These compounds are often used as intermediates for producing biologically active products, including drugs, herbicides, insecticides, and fungicides. The applications of pyridines and their benzo derivatives have been described over the past decade along with natural products containing the pyridine ring system. These applications are classified into three categories: biological, chemical and functional. Functional applications based on the physical properties of pyridines and their benzo-derived compounds describe colors, flavors, and ionic liquids. Chemical applications, based on the chemical properties of pyridines and benzo derivatives, describe reagents in analytical chemistry as well as catalysts and reagents in organic synthesis. Biological applications based on the environmental activity of pyridine compounds in pharmaceutical, agrochemical and veterinary products have been presented in this study. In this research study, the synthesis of ۱,۴-Dihydropyridine derivatives was investigated through a three-component one-pot reaction using nano-cerium oxide catalyst

## کلمات کلیدی:

Multicomponent reactions (MCRs) Nano, cerium oxide Dihydropyridine derivatives One, pot synthesis

## لینک ثابت مقاله در پایگاه سیویلیکا:

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