

## عنوان مقاله:

One Pot Synthesis of Highly Functionalized Tetrahydropyridines Using Nano-TiCl<sub>4</sub>/cellulose as Biodegradable and Eco-Friendly Catalyst

## محل انتشار:

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## خلاصه مقاله:

TiCl<sub>4</sub>/nano-cellulose as a biodegradable and eco-friendly Lewis acid catalyst was synthesized via reaction of nano-cellulose and TiCl<sub>4</sub>. This catalyst was characterized and used for synthesis of asymmetric highly functionalized tetrahydropyridines via a five-component condensation reaction of p-substituted anilines, aldehydes and ethyl acetoacetate under solvent-free condition. Simple methodology, eco-friendly catalyst, clean procedure, easy work-up and high yields are some of the important advantages of this protocol

## کلمات کلیدی:

Nano-TiCl<sub>4</sub>/cellulose, Tetrahydropyridines, Nano-cellulose, Lewis acid catalyst, biodegradable catalyst

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1766217>

