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ARTICLE

## Efficient one-pot synthesis of polyhydroquinoline derivatives through the Hantzsch condensation using IRMOF-3 as heterogeneous and reusable catalyst

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### Abstract

A mesoporous Zn-based 2-amino terephthalate metal organic framework (IRMOF-3) catalyst was prepared using the solvothermal method. The synthesized catalyst was characterized by powder X-ray diffraction (XRD), thermogravimetric analysis (TGA), Fourier transform infrared spectroscopy (FT-IR), scanning electron microscopy (SEM), energy-dispersive spectroscopy (EDAX), and Brunauer–Emmett–Teller surface area analysis (BET). It was applied as an effective heterogeneous catalyst for the synthesis of one-pot four-component polyhydroquinoline derivatives via the Hantzsch condensation. The present method offers several advantages over other reported methods such as easy separation, mild reaction condition, and excellent yield of desired product. Furthermore, the catalyst can be reused without loss in activity.

### Supporting Information



Filename	Description
<a href="#">jccs202000303-sup-0001-SupinfoS1.docx</a> Word 2007 document , 2.9 MB	<b>Appendix S1.</b> Supporting information

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