

Abstract

In this research, visible-light-induced tandem oxidation reaction of *o*-aminobenzamide and alcohols toward quinazolin-4(3*H*)-one in the presence of a new MOF is reported. The porous MOF was prepared by solvothermal reaction between Iron(III)-porphyrin and zirconium tetrachloride, then metallated again by post-synthetic modification method the Iron(III) incorporated iron(III)-porphyrin-based MOF, showed catalytic performance superior to that un-metallated MOF. The MOF was characterized by a variety of techniques, including FT-IR, PXRD, SEM/EDAX, TGA/DSC, ICP-OES, UV-Vis DRS and BET surface area. The advantages of this method are with no need additional additive, optimal use of energy, eco-friendly and reused runs without significant loss of catalytic activity.

Keywords: Metal-Organic Frameworks, Quinazolin-4(3*H*)-ones, Porphyrin, Metaloporphyrins, Green Chemistry, Photocatalyst and Tandem Reaction.



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**A porphyrin-based metal-organic framework as an
enzyme-mimic catalyst for tandem synthesis of
quinazolin-4(3*H*)-ones**

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