

## Abstract Details

**Title:** Solvent-free Synthesis of Dihydropyrimidinones/Thiones and Naphthoxazinones Derivatives Using Recyclable Mesoporous Mixed Metal Oxide Nanocrystals as Robust and Efficient Heterogeneous Catalyst

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**Abstract:** Mesoporous mixed metal oxide nanocrystals of Al<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub>, Al<sub>2</sub>O<sub>3</sub>-V<sub>2</sub>O<sub>5</sub> and Al<sub>2</sub>O<sub>3</sub>-CuO have been applied as heterogeneous catalysts for the synthesis of series of medicinally significant dihydropyrimidinones/thiones and naphthoxazinones derivatives under solvent-free conditions. The developed method has the rewards of operational simplicity; shorter reaction times along with high yields and recyclability of the catalysts are the unique features of the heterogeneous catalysis.

**Keywords:** Dihydropyrimidinone; Naphthoxazinone; 2-Naphthol; Aldehyde; Mesoporous mixed metal oxide; Heterogeneous catalyst.