

Greener synthesis, molecular docking, antimicrobial and antimalarial activities of some unsaturated ketones

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Received 3 July 2024; accepted (revised) 2 July 2025

A series of α,β -unsaturated ketones including isoquinoline enones have been synthesised by fly-ash:sulphated SnO_2 catalyzed Crossed-Aldol condensation of various aryl methyl ketones and aldehydes under solvent-free microwave irradiation technique. In this synthetic methodology, the obtained yield of the unsaturated ketones is more than 90%. The synthesised ketones have been characterized by their physical constants, micro analysis and spectroscopic data. The molecular docking and, *in vitro* antimicrobial and antimalarial activities of the synthesised ketones have been studied.

Keywords: Fly-ash:sulphated SnO_2 , Aryl enones, Environmentally-benign reaction, Molecular docking, Antimicrobial activity, Antimalarial activity