SUPPORTING INFORMATION

Copper-catalyzed regioselective synthesis of furan via tandem cycloaddition of ketone with unsaturated carboxylic acid under air

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1. General Information:

$^1$H NMR spectra were determined on 500 MHz, 400 MHz & 300 MHz spectrometer as solutions in CDCl$_3$. Chemical shifts are expressed in parts per million ($\delta$) and are referenced to tetramethylsilane (TMS) as internal standard and the signals were reported as s (singlet), d (doublet), t (triplet), dd (double doublet), m (multiplet) and coupling constants $J$ were given in Hz. $^{13}$C NMR spectra were recorded at 125 MHz, 100 MHz & 75 MHz in CDCl$_3$. TLC was done on TLC Silica gel 60 F$_{254}$ coated on aluminium sheets (Merck). Silica gel (60-120 mesh) was used for column chromatography. Petroleum ether refers to the fraction boiling in the range of 60-80 °C unless otherwise mentioned. All solvents were dried and distilled before use. Commercially available substrates were freshly distilled before the reaction. Solvents, reagents and chemicals were purchased from Aldrich, Merck, Himedia, and Spectrochem. All reactions involving moisture sensitive reactants were executed using oven dried glassware.

2. NMR spectra for the synthesized Furan derivatives: