Supporting information

NMR spectra for products identification-

In order to obtain an NMR spectrum a sample of the isolated product was placed in an NMR tube and dissolved in DMSO-d^6. ^{1}H-NMR spectra were recorded with Bruker DRX-400 instrument.

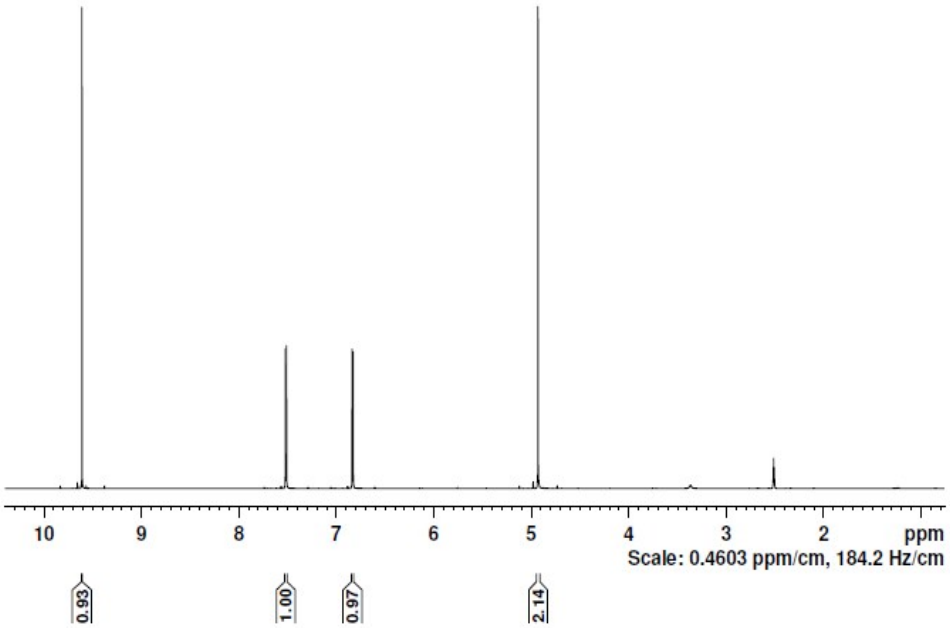

Fig. A1. ^{1}H-NMR spectrum for isolated CMF (5-chloromethyl furfural). CMF have been isolated and purified using column chromatography. After dichloromethane, used as the mobile phase, was evaporated, a few micrograms of pure CMF were placed in NMR tube. Then DMSO-d^6 was added as the NMR solvent, and the spectrum was examined with Bruker DRX-400 instrument.

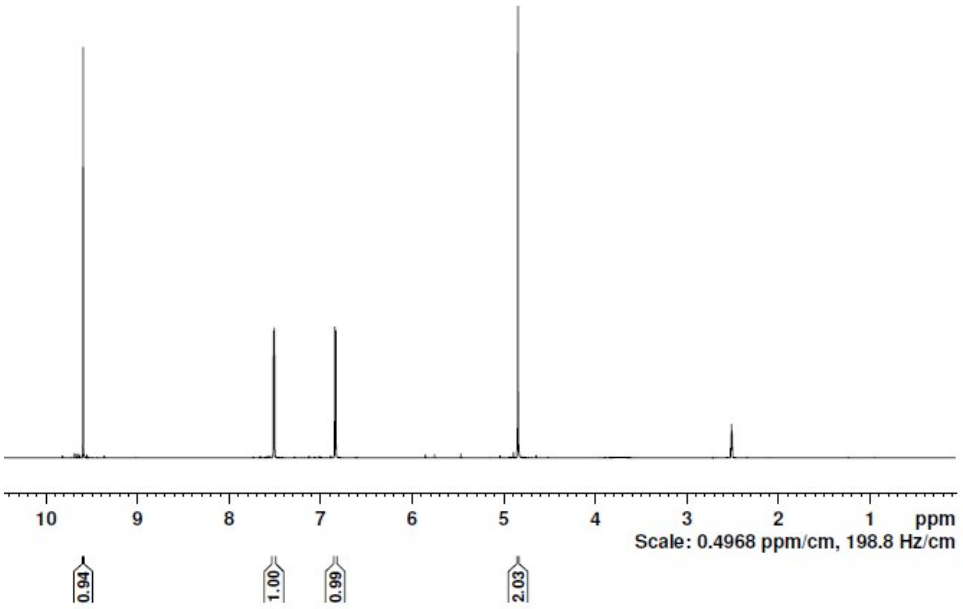

Fig. A2. ^{1}H-NMR spectrum for isolated BMF (5-bromomethyl furfural). BMF have been isolated and purified using column chromatography. After dichloromethane, used as the mobile phase, was evaporated, a few micrograms of pure BMF were placed in NMR tube. Then DMSO-d^{6} was added as the NMR solvent, and the spectrum was examined with Bruker DRX-400 instrument.

UV-vis spectra and calibration –

Calculation of CMF molar absorption coefficient was based on its absorption band at 279nm. The slope of the Beer-Lambert equation for CMF solutions, 10-40e^{-5}M, in DCE is the molar absorption coefficient for CMF. Since A= C×ε×l, where A is the absorption, C is the concentration, l is the optical length path and ε is the molar absorption coefficient, we could calculate the molar absorption coefficient to be ε = 16070 M^{-1} for CMF (see Fig. A3). The same principle was applied for BMF. UV-vis absorption of isolated and purified BMF was measured (at 286nm) at different concentrations, 10-40e^{-5}M, so its molar absorption coefficient could be calculated using Beer-Lambert law. We have found that for BMF ε = 18777 M^{-1} (see Fig. A4).

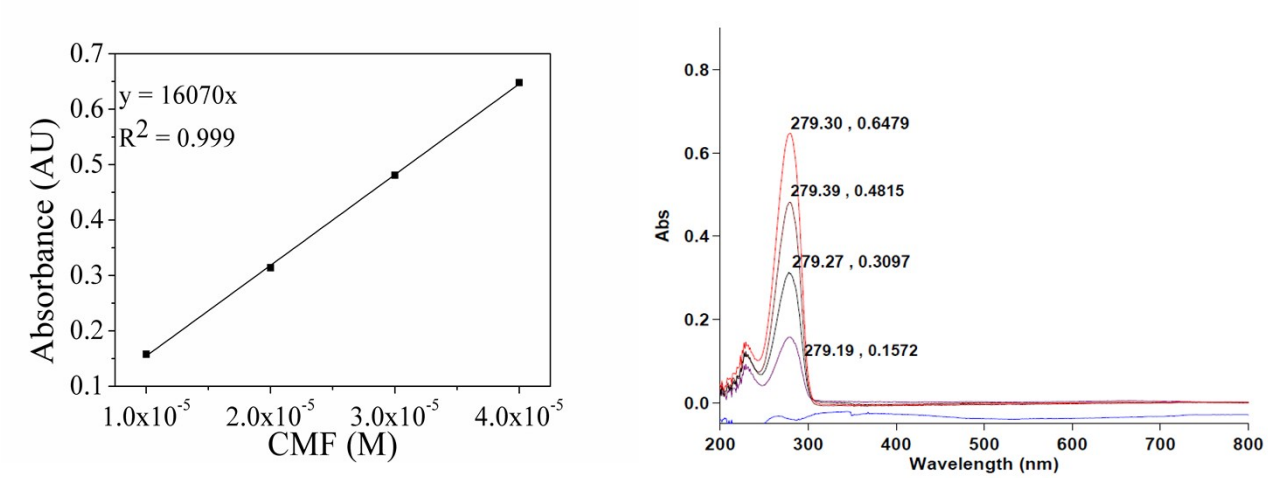

Fig. A3. UV-vis spectrum and calibration curve for CMF. From the right UV-vis spectra of CMF at different concentrations, and from the left the calibration curve for molar absorption coefficient determining (ε = 16070M^{-1}). The calibration was performed on isolated and purified CMF dissolved in 1,2-dichloroethane.

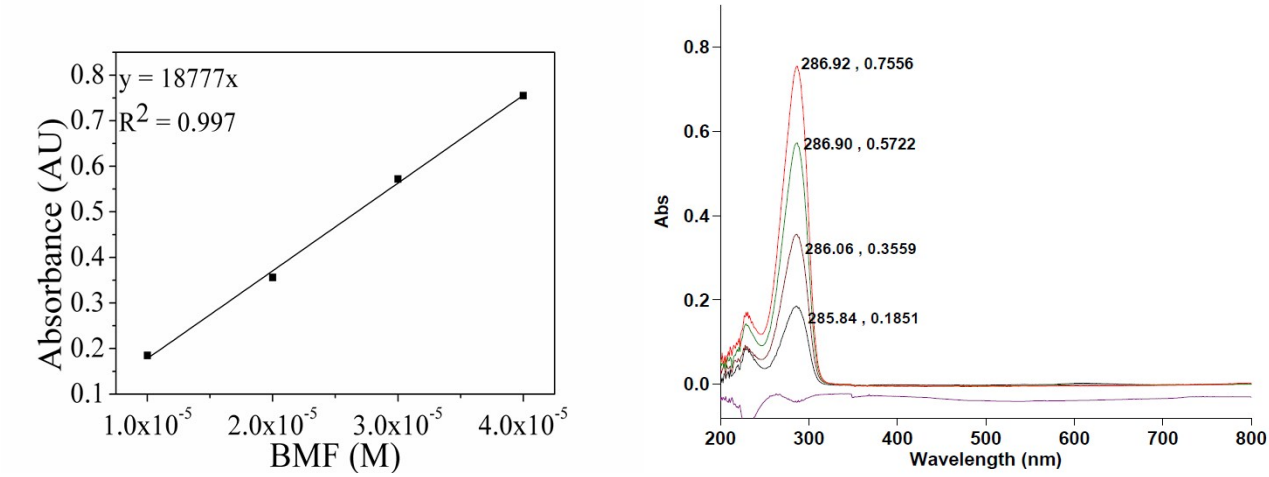

Fig. A4. UV-vis spectrum and calibration curve for BMF. From the right UV-vis spectra of BMF at different concentrations, and from the left the calibration curve for molar absorption coefficient determining (ε = 18777M^{-1}). The calibration was performed on isolated and purified BMF dissolved in 1,2-dichloroethane.