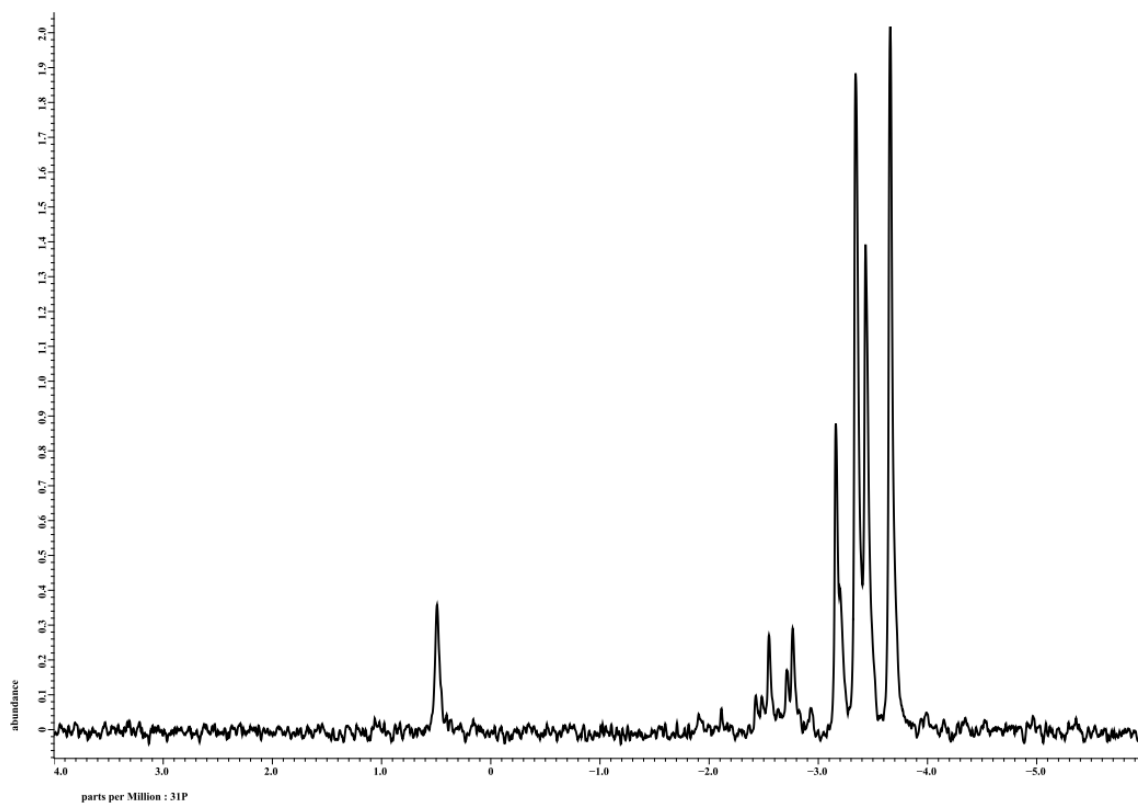


# Selective oxidation of complex, water-insoluble biomass to formic acid using additives as reaction accelerator

## Supplementary Information

The  $^{31}\text{P}$ - and  $^{51}\text{V}$ -NMR spectra were recorded on a JEOL ECX-400MHz. The first spectrum shows the  $^{31}\text{P}$ -Signals, recorded from the reaction mixture of the experiment from entry 2 in table 3 (cellulose with TSA additive) before reaction, giving the typical signals for the  $\text{H}_5\text{PV}_2\text{Mo}_{10}\text{O}_{40}$  catalyst in water, as already shown by Pettersson et. al. [L. Pettersson, I. Andersson, J. Grate, A. Selling, *Inorg. Chem.*, 1994, 33, 982-993].



The second spectrum shows the  $^{51}\text{V}$ -Signals of the same reaction mixture (entry 2, Table 3).

The spectrum at the bottom, recorded from the reaction mixture of the experiment from entry 2 in table 3 before reaction, shows the typical signals for the  $\text{H}_3\text{PV}_2\text{Mo}_{10}\text{O}_{40}$  catalyst in water, as already shown by Pettersson et. al. [L. Pettersson, I. Andersson, J. Grate, A. Selling, *Inorg. Chem.*, 1994, 33, 982-993]. The spectrum at the top was recorded from the same reaction mixture after reaction. The spectrum clearly shows that the small signal shift arises from the changing solvent as FA was built during the reaction.

