Electronic Supplementary Information for Dalton Transactions

Supercritical carbon dioxide, a new medium for aerobic alcohol oxidations catalysed by copper-TEMPO

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Electronic supplementary information (ESI)

Fig. S1. IR spectrum of compound **2**.

Fig. S2. UV-Visible spectra of **2** in hexane, dichloromethane and $scCO_2$.

Fig. S3. (a) Cu-PDMS supported material **2**; (b) solution of **2** in $scCO_2$.

Experimental details for aerobic oxidations in $scCO_2$.

Fig. S4. Vial containing the copper and TEMPO catalysts being charged to the high-pressure stainless steel cell.

Fig. S1. IR spectrum of **2**.

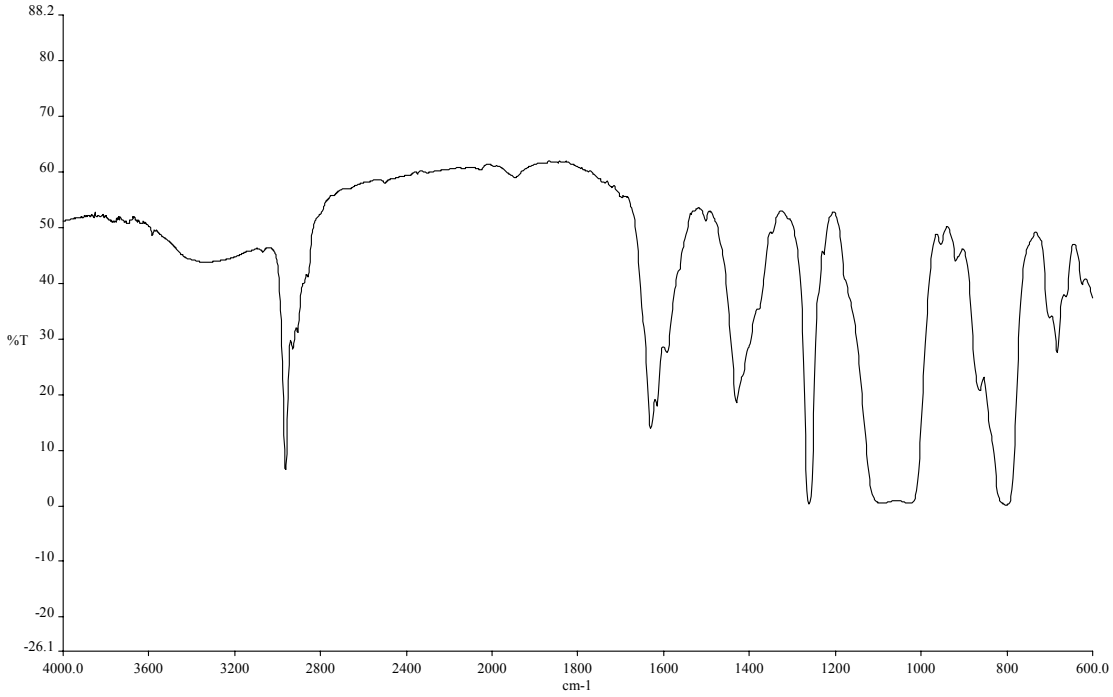

Fig. S2. UV-Visible spectra of **2** in different solvents.

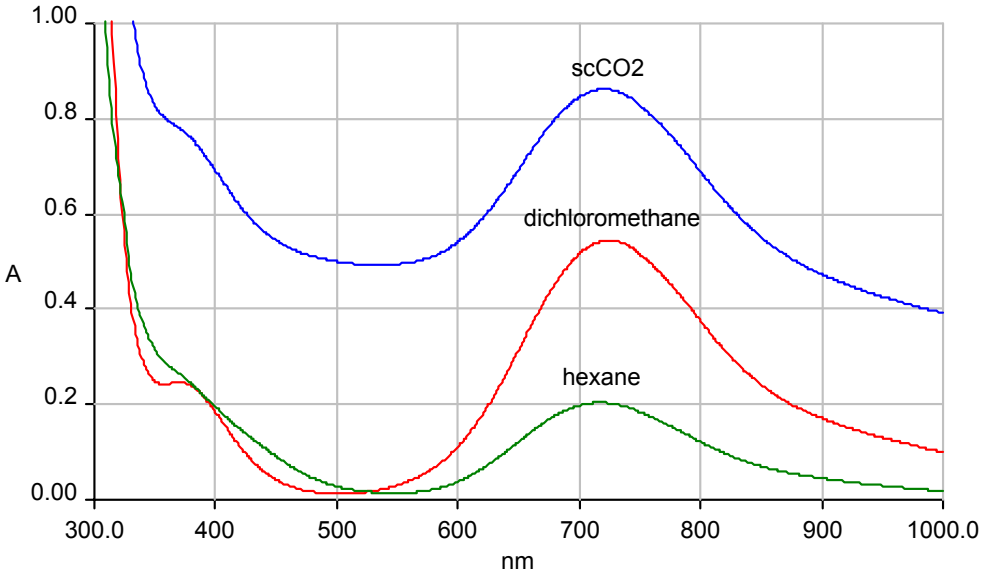

Fig. S3. (a) Cu-PDMS supported material **2**; (b) solution of **2** in $scCO_2$.

(a) (b)

Experimental details for aerobic oxidations in $scCO_2$.

The alcohol substrate was charged to the stainless steel high-pressure cell reactor along with a stirrer flea. The specified quantities of catalyst and TEMPO were charged to a separate glass vial also containing a small stirrer flea (Fig. S4). In this manner, contact between the substrate and catalysts was prevented prior to dissolution. The reactor was sealed and vacuum applied, to remove air. The reactor was the brought to the required pressure of O_2 before warming the reactor to the specified temperature in a thermostatted oil bath. CO_2 was then pumped into the reactor until the required 150 bar was achieved. Stirring was then initiated.

Fig. S4. Vial containing the copper and TEMPO catalysts being charged to the high-pressure stainless steel cell.