Electronic Supplementary Information

Design of 30 mL high pressure window autoclave main body

The autoclave main body was built by the mechanical workshop at ITMC and its development has not been part of this work. Still, 5 since there is no further information available in literature, two additional figures are included here.
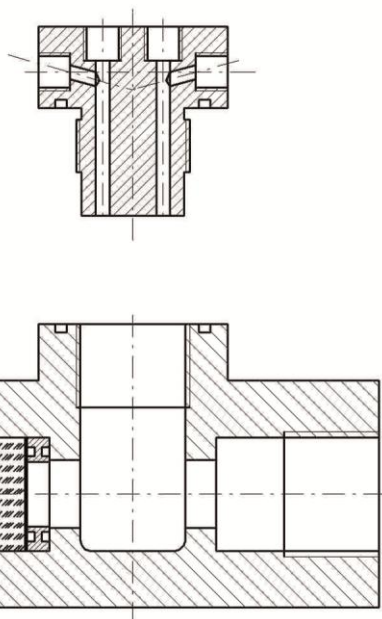

Fig. 1 Cross-sectional drawing of the stainless steel body of a standard 30 mL window autoclave

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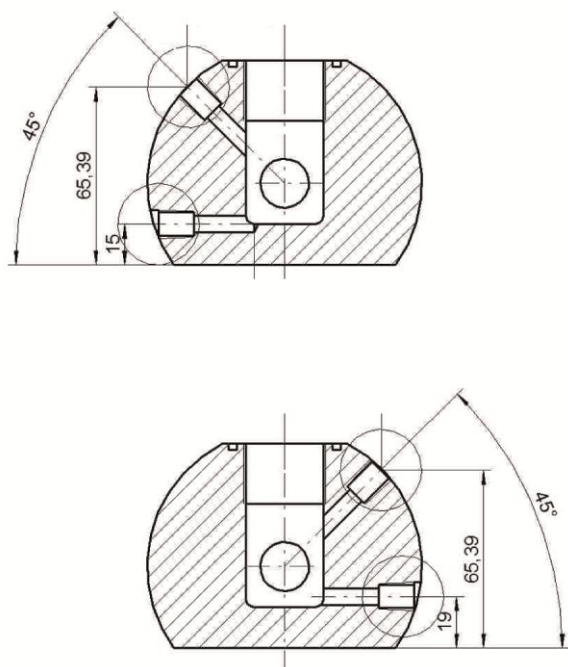**Fig. 2** Cross-sectional drawing of the modified stainless steel body including drill holes for outlet, spectroscopic probes and liquid/solid inlet

Experimental procedure

For the model system, 5.5 g of 1-hexanol were filled into the high 15 pressure autoclave, the stirrer was set to a speed of 100 rpm and automatic spectroscopic measurements were started. Afterwards, the autoclave was well tightened and CO_2 was introduced through a control valve until a pressure of 30 bar was reached.

For the IL synthesis, DBU was first dried under reflux over 20 CaH_2, then distilled under reduced pressure and stored over a molar sieve under argon atmosphere. 1-hexanol was distilled under reduced pressure, degassed and stored over a molar sieve under argon atmosphere. An equimolar mixture of DBU (4.3508 g, mmol) and hexanol (2.8575 g, mmol) was introduced 25 into a Schlenk tube under argon atmosphere and stirred well. The mixture was then transferred into the autoclave purged with argon, the stirrer speed set to 300 rpm and the autoclave well tightened. Automatic spectroscopic measurements were started and CO_2 was introduced through a control valve until a pressure 30 of 40 bar was reached.
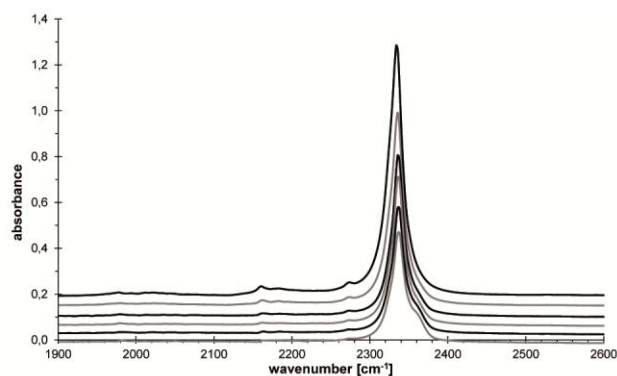
Additional spectra

Fig. 3 IR absorbance spectra of the gas phase during absorption of CO_2 at different times and hence pressures
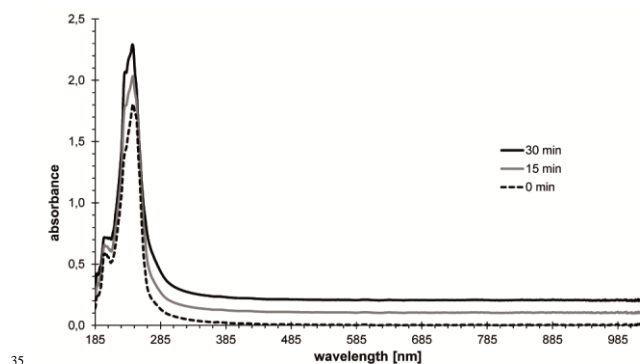

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Fig. 4 UV-Vis absorbance spectra of the IL synthesis at different reaction times