

Engineering Heterogeneous Catalysts for CO₂ Utilisation

William Webb, W.Webb@soton.ac.uk

Robert Raja, R.Raja@soton.ac.uk

School of Chemistry

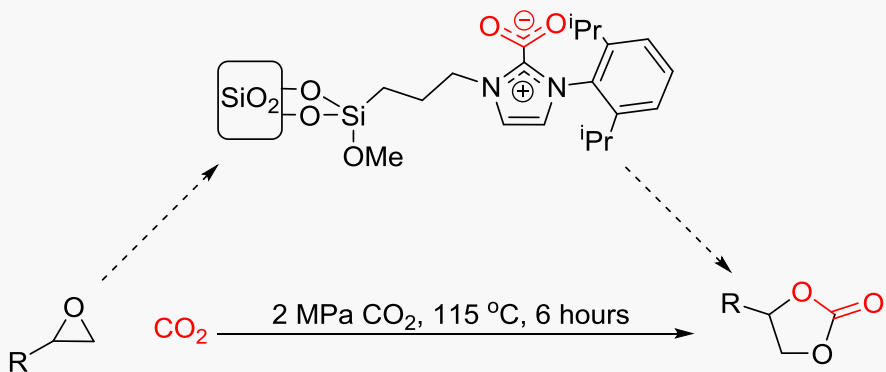
Background

- CO₂ levels continue to rise, currently at 404 ppm¹
- CO₂ has the potential to be a single carbon building block
- Utilisation hindered by low reactivity and high stability
- Catalysis offers a potential solution

¹<http://www.esrl.noaa.gov/gmd/ccgg/trends/weekly.html>

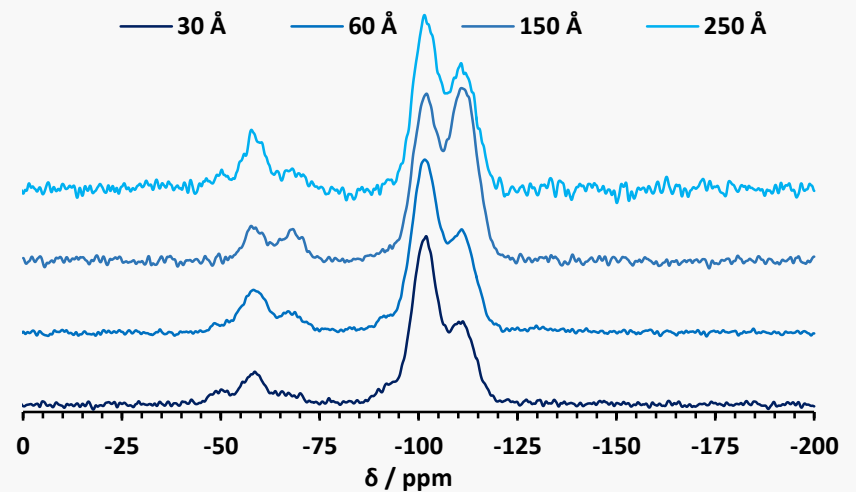
Results

- Success in catalysing CO_2 reactions



- 96 % conversion
- 99 % selectivity

- Catalyst analysed by BET, TGA, Elemental Analysis and solid-state NMR



- Characterisation confirms anchoring