# Center for Integrated Catalysis Webinar Series

## Prof. Charlotte Williams

Department of Chemistry

University of Oxford


# Activating Renewable Resources Using Heterodinuclear Polymerization Catalysts


**Abstract:** This lecture will focus on the catalytic activation of carbon dioxide with epoxides, anhydrides and lactones, some of which are bio-based, to make oxygenated polymers. In particular, the opportunities to improve activity through exploiting synergy in dinuclear metal complexes will be explored. Insights into the phenomena which may underpin catalytic synergy will be discussed with reference to catalysts combining transition metals with alkali/alkaline earth metals. In the second part, organometallic heterodinuclear catalysts will be described which improve upon end-group control and enable production of sequenced block polymers. The importance of control over the organometallic chemistry underpinning their selectivity in switchable polymerization catalyses will be discussed and some proof of concept performances as ductile plastics, elastomers and pressure sensitive adhesives will be provided.


CENTER FOR INTEGRATED CATALYSIS

**Tuesday, July 6th, 2021**

**10:00 a.m. (PDT)| Zoom**

**1:00 p.m. (EDT)**