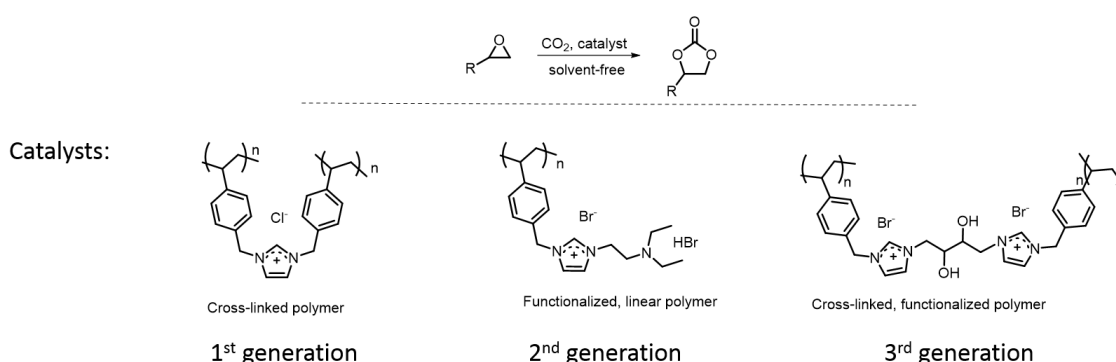


Design of ionic polymer catalysts for the synthesis of carbonates from CO₂ and epoxides

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The synthesis of cyclic carbonates from epoxides and CO₂ (CCE reaction) is an atom-efficient, scalable reaction of industrial importance. It is an important example of a catalytic reaction highlighting the utilization of CO₂ as a building block. Numerous catalysts (both metallic and metal-free)[1] have been proposed for this reaction, and in particular, ionic liquids and ionic polymers have emerged as a class of potent catalysts in this transformation. In our group, we have prepared imidazolium-based polymers (Fig. 1) incorporating functional groups that are potent catalysts for the CCE reaction.[2-4]



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