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A review of copolymerization of green house gas carbon dioxide and oxiranes to produce polycarbonate

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Abstract

Carbon dioxide is highly stable and low reactivity element which is known to cause greenhouse effect of the Earth. Over the decades, researches have been conducted to utilize abundant carbon dioxide to turn into value added products while reducing its impact to the environment. One of the approaches is reacting carbon dioxide with oxiranes to produce polycarbonate. The low reactivity characteristic of carbon dioxide requires effective and efficient catalysts to make the copolymerization possible. This review highlights the major development in the catalytic copolymerization process of oxiranes and carbon dioxide.

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