

Direct Synthesis of Dimethyl Carbonate with Supercritical Carbon Dioxide

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The direct synthesis of dimethyl carbonate (DMC) from methanol and carbon dioxide was investigated. In the proposed synthesis of DMC, the reaction of methanol with carbon dioxide was coupled simultaneously with potassium carbonate as a catalyst and iodo methane as the reaction promoter under reaction conditions at which carbon dioxide was in supercritical state. The reactions were experimentally screened at temperatures from 100 to 200 °C and pressures from 70.0 to 25.0 MPa.