Supplementary Material

Ionic liquids Catalysis for Carbon Dioxide Conversion with Nucleophiles

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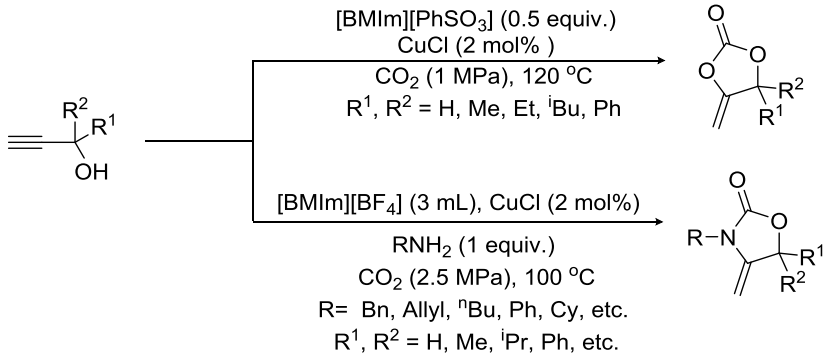

FIGURE S1 | Cu-catalyzed reaction of propargylic alcohols with CO_2.

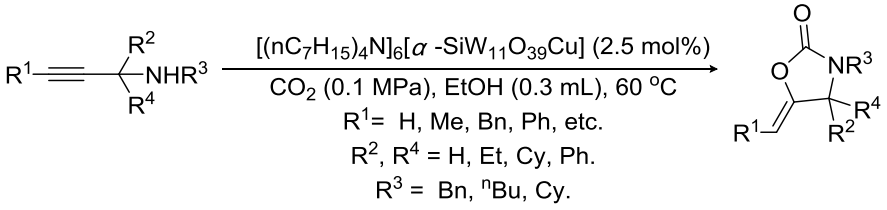

FIGURE S2 | Synthesis of oxazolidinones using Cu/ILs.

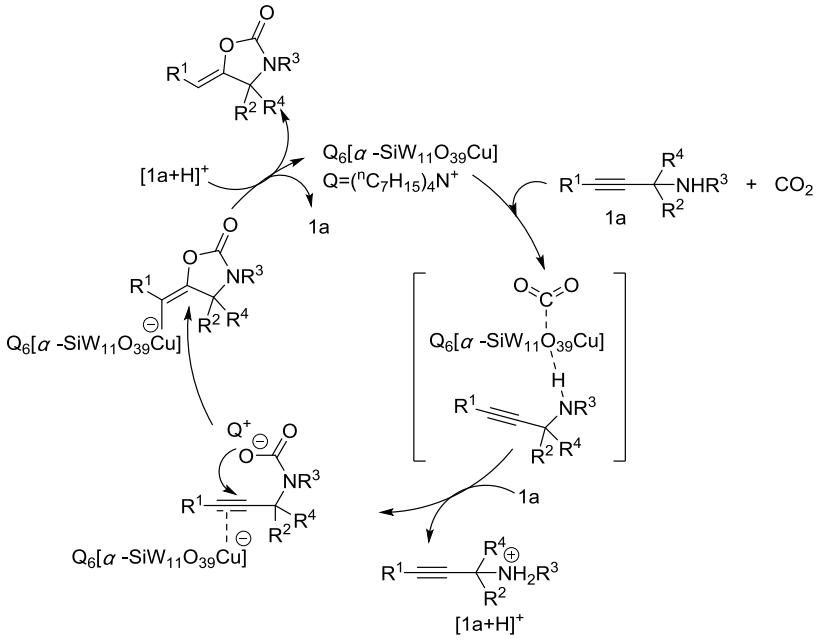

FIGURE S3 | Plausible mechanism by using Cu/ILs as catalyst.

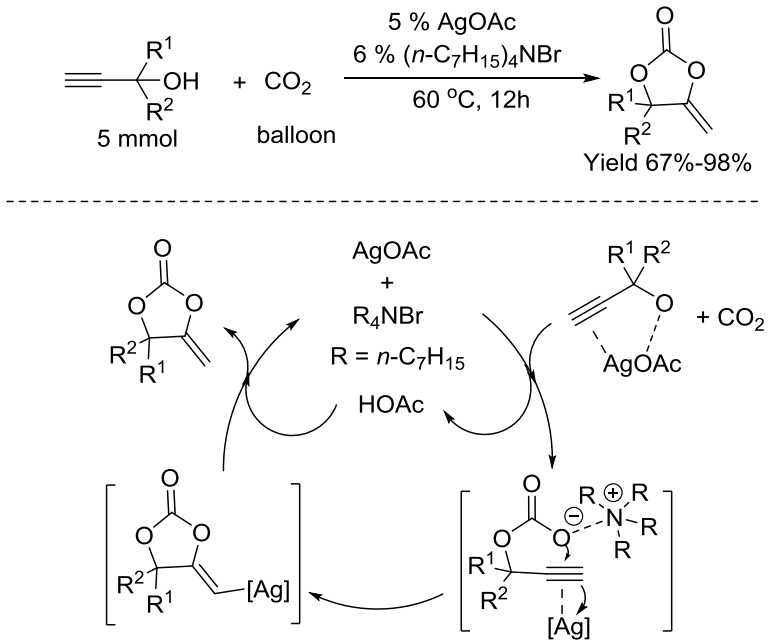

FIGURE S4 | Plausible reaction mechanism.

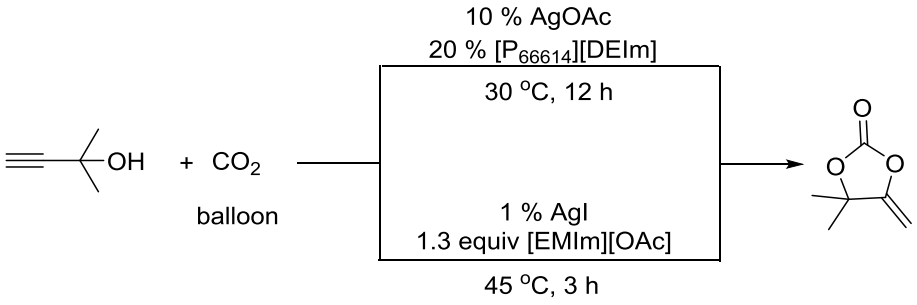

FIGURE S5 | Reaction of CO_2 and propargylic alcohols by using Ag/IL system.

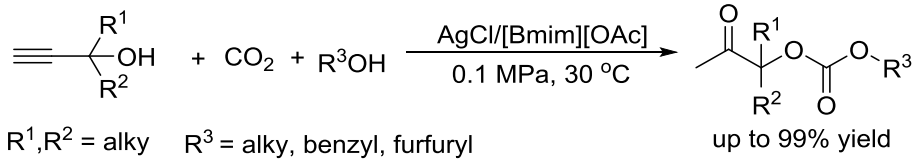

FIGURE S6 | Reaction of CO_2, propargylic alcohols, and primary alcohols to synthesize asymmetrical organic carbonates.

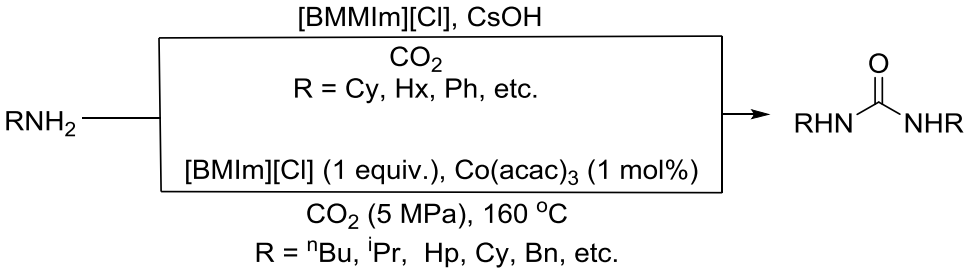

FIGURE S7 | Synthesis of urea in ILs.

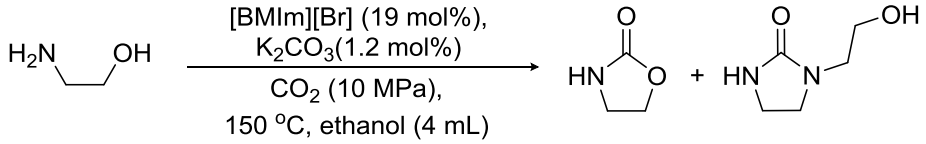

FIGURE S8 | Synthesis of oxazolidinones in ILs.

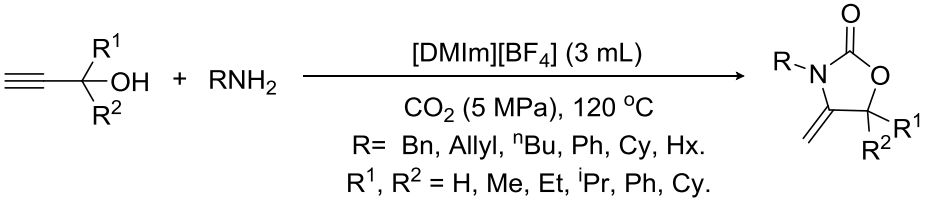

FIGURE S9 | ILs-catalyzed three-component reaction of propargylic alcohols, amines, and CO_2.

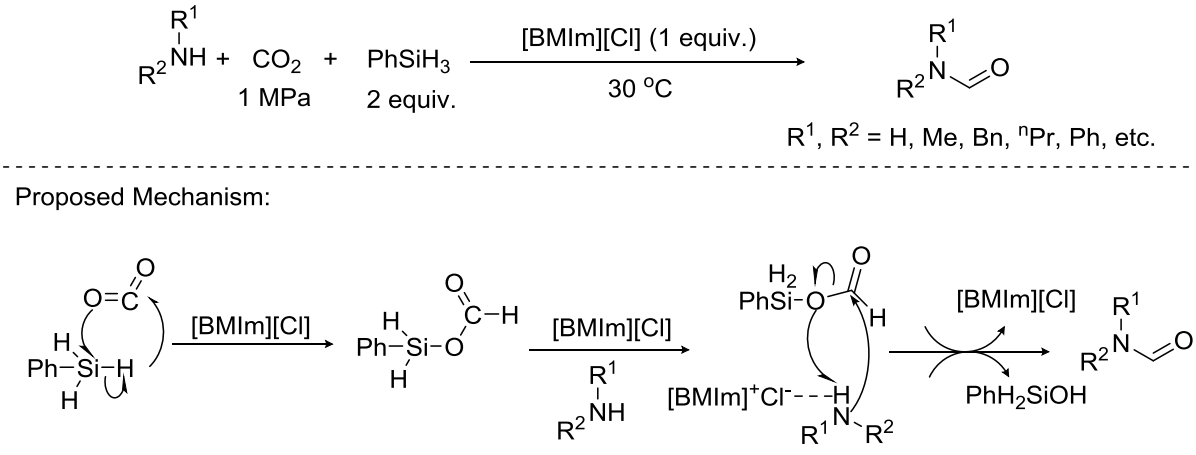

FIGURE S10 | Reductive functionalization of CO_2 with amines in ILs.

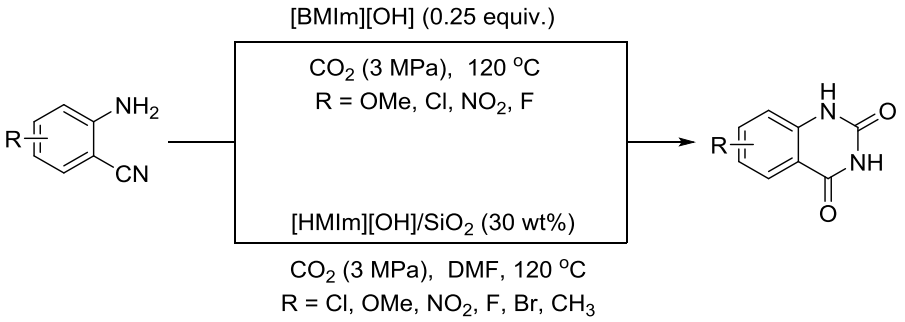

FIGURE S11 | ILs-catalyzed reaction of 2-aminobenzonitriles with CO_2.

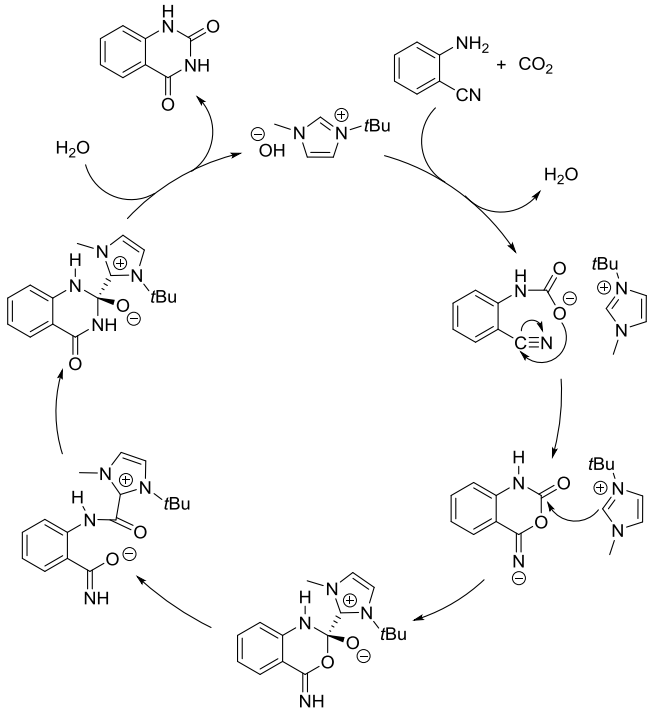

FIGURE S12 | The mechanism proposed by Wu group.

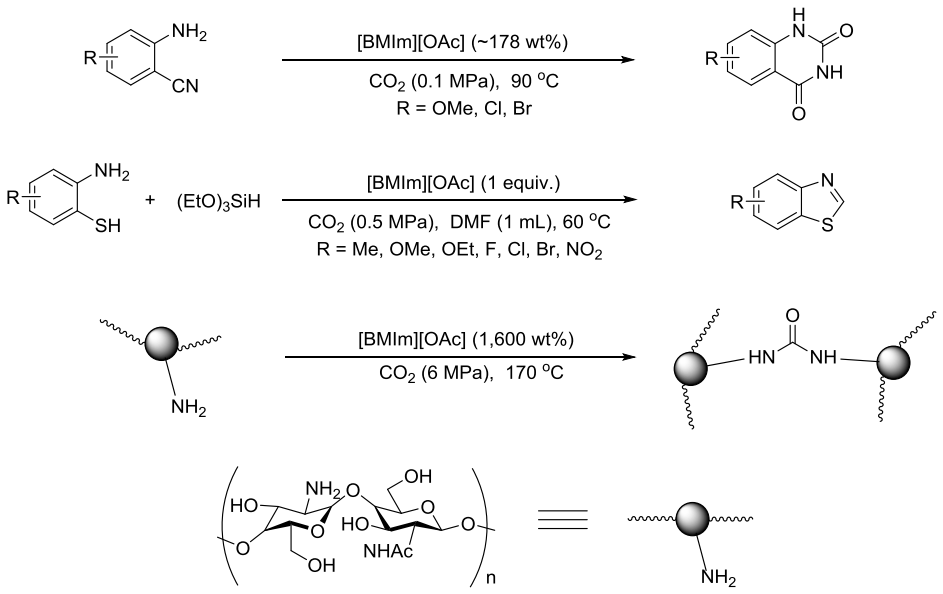

FIGURE S13 | Typical reactions catalyzed by [BMIm][OAc].

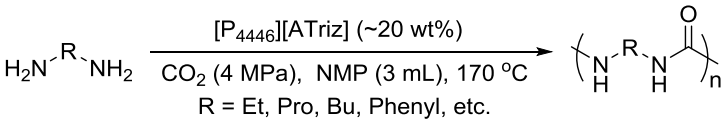

FIGURE S14 | Synthesis of polyurea using $[P_{4446}][ATriz]$.

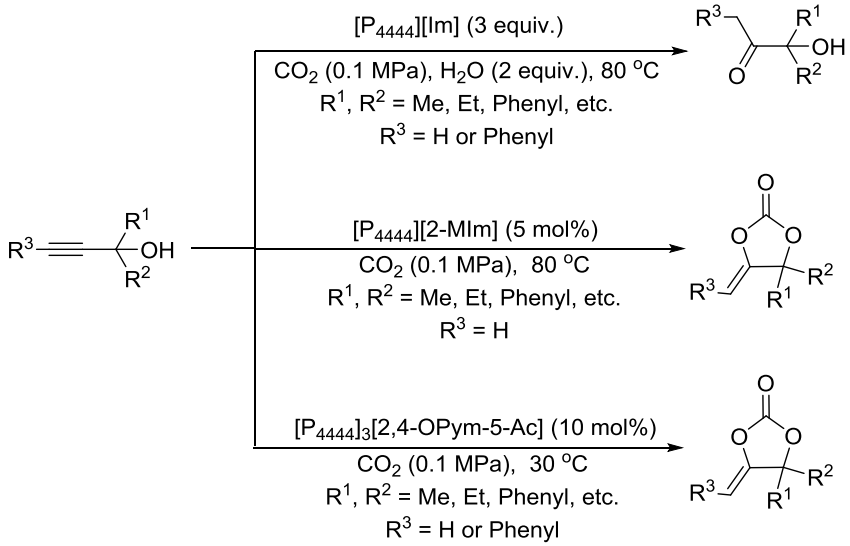

FIGURE S15 | Reaction of propargylic alcohol and CO_2 under different conditions.

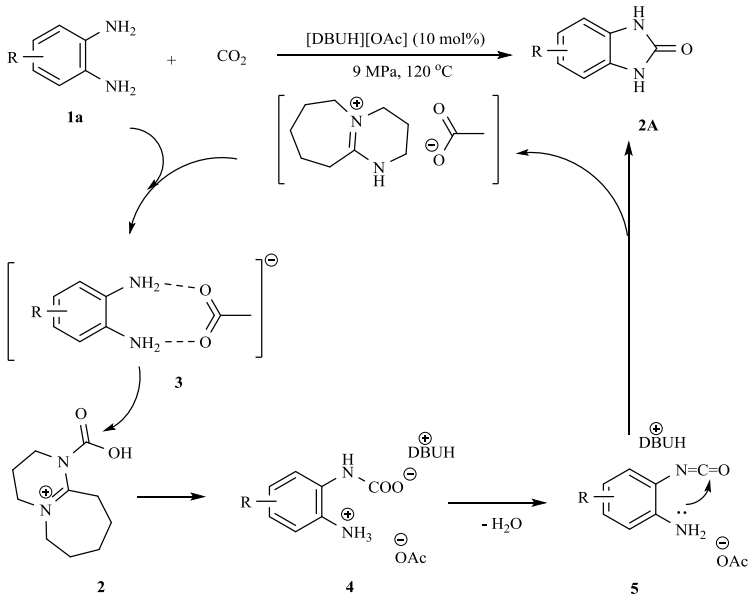

FIGURE S16 | Carbonylative cyclization of vicinal diamines with CO_2.

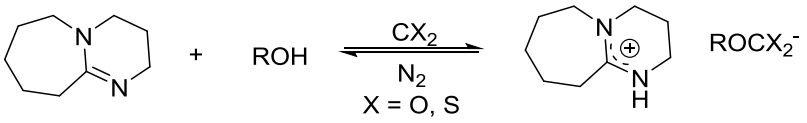

FIGURE S17 | The synthesis of two types of ILs by capturing CX_2 (O, S).

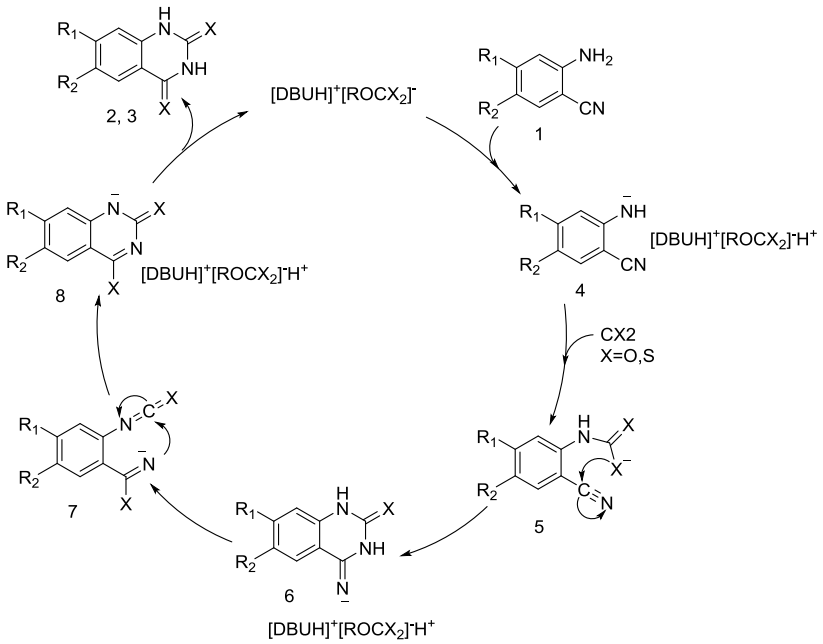

FIGURE S18 | A plausible mechanism for the capture of CX_2 (O, S) by synthesizing quinazoline derivatives in ReILs.

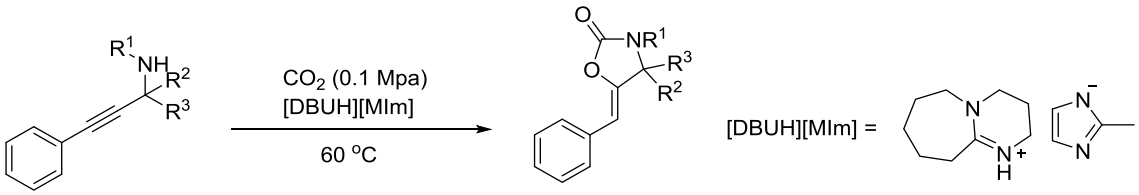

FIGURE S19 | Reaction of CO_2 with propargylic amine in ILs.

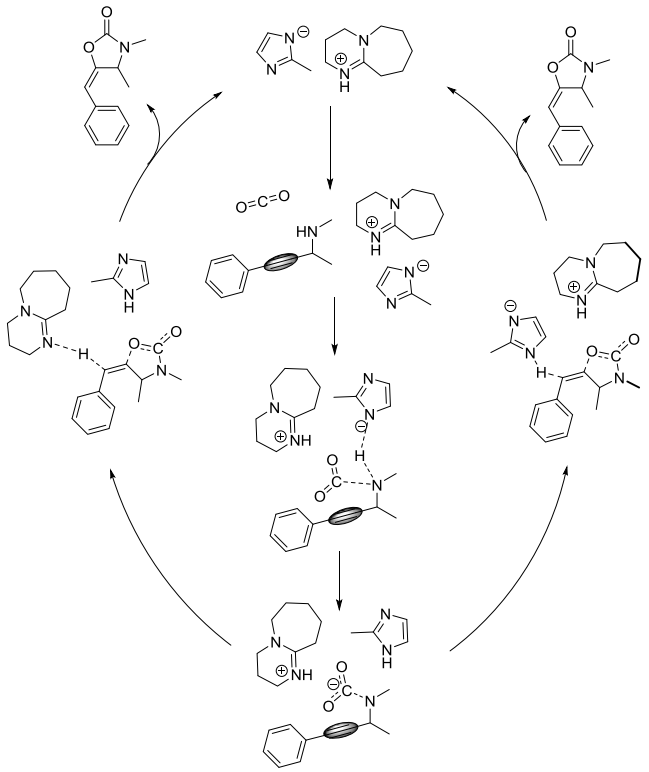

FIGURE S20 | The mechanism proposed by Han group.

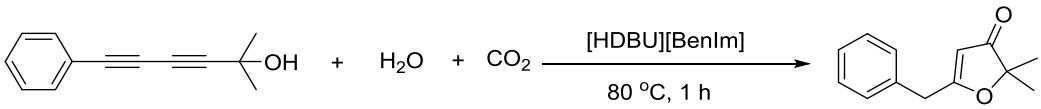

FIGURE S21 | Reaction of CO_2 with diyne alcohols in [HDBU][BenIm].