

## Supporting information

### Title: Metal free synthesis of ethylene and propylene carbonate from alkylene halohydrin and CO<sub>2</sub> at room temperature

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**Figure S1-** <sup>13</sup>C NMR spectra for a) reaction mixture of DBU and ethanol, and b) reaction mixture after bubbling of CO<sub>2</sub> in DBU and ethanol (in DMSO).

**Figure S2-** a) <sup>1</sup>H NMR spectra for reaction mixture after bubbling of CO<sub>2</sub> or <sup>13</sup>C enriched CO<sub>2</sub> in DBU and ethylene chlorohydrin (in between 4.4-5.5 ppm), two dimensional NMR analysis of the reaction mixture with <sup>13</sup>C enriched CO<sub>2</sub> b) <sup>1</sup>H-<sup>13</sup>C HSQC and, c) <sup>1</sup>H-<sup>13</sup>C HMBC NMR analysis (NMR analysis with D<sub>2</sub>O in capillary).

**Figure S3-** <sup>1</sup>H NMR spectra for a) reaction mixture of DBU and propylene chlorohydrin, and b) reaction mixture after bubbling of CO<sub>2</sub> in DBU and propylene chlorohydrin and, c) commercially available propylene carbonate.

**Figure S4-** a) <sup>1</sup>H NMR spectra for reaction mixture after bubbling of CO<sub>2</sub> or <sup>13</sup>C enriched CO<sub>2</sub> in DBU and propylene chlorohydrin (in between 4.6-5.0 ppm), two dimensional NMR analysis of the reaction mixture with <sup>13</sup>C enriched CO<sub>2</sub> b) <sup>1</sup>H-<sup>13</sup>C HSQC and, c) <sup>1</sup>H-<sup>13</sup>C HMBC NMR analysis (NMR analysis with D<sub>2</sub>O in capillary).

**Figure S5-** <sup>13</sup>C NMR spectra of a) DBU, equivalent mixture of DBU and ethylene bromohydrin or 2-iodoethanol b) before and, c) after bubbling CO<sub>2</sub> (NMR analysis with D<sub>2</sub>O in capillary).

**Figure S6-** <sup>13</sup>C NMR spectra of a) DBU, equivalent mixture of DBU and ethylene iodohydrin or 2-iodoethanol b) before and, c) after bubbling CO<sub>2</sub> (NMR analysis with D<sub>2</sub>O in capillary).

**Figure S7-** <sup>1</sup>H NMR spectra for a) equivalent mixture of DBU and 3-chloro-1-propanol in DMSO, reaction mixture of DBU and 3-chloro-1-propanol in DMSO after bubbling of CO<sub>2</sub> for b) 20 min, c) 1h and, d) 2h. (NMR analysis with D<sub>2</sub>O in capillary)

**Figure S8-** <sup>13</sup>C NMR spectra of equivalent mixture of DBU and 3-bromo-1-propanol in DMSO a) before and, b) after bubbling CO<sub>2</sub> (NMR analysis with D<sub>2</sub>O in capillary).

**Figure S9-** <sup>1</sup>H NMR spectra for a) 50 vol.% solution of DBU in the ethylene chlorohydrin and, b) reaction mixture after bubbling of CO<sub>2</sub> in 50 vol.% solution of DBU in the ethylene chlorohydrin.

**Figure S10-** <sup>1</sup>H NMR spectra for a) 50 vol.% solution of DBU in the propylene chlorohydrin and, b) reaction mixture after bubbling of CO<sub>2</sub> in 50 vol.% solution of DBU in the propylene chlorohydrin.

**Figure S11-** <sup>1</sup>H NMR spectra for a recovered a) Ethylene carbonate and, b) Propylene carbonate.

**Figure S12-** <sup>1</sup>H NMR spectra for a recovered a) [DBUH][Cl] and, b) DBU.

Figure S1.

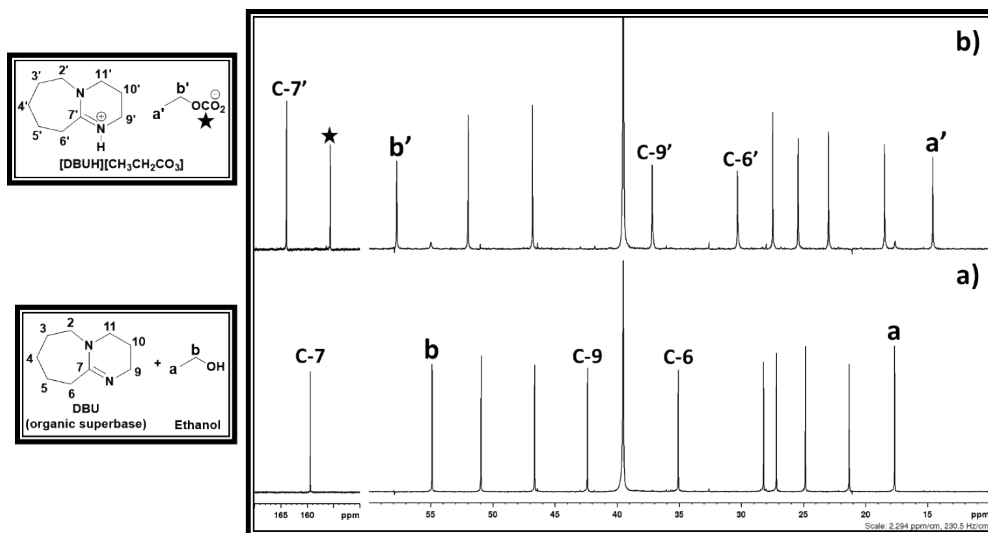


Figure S2:

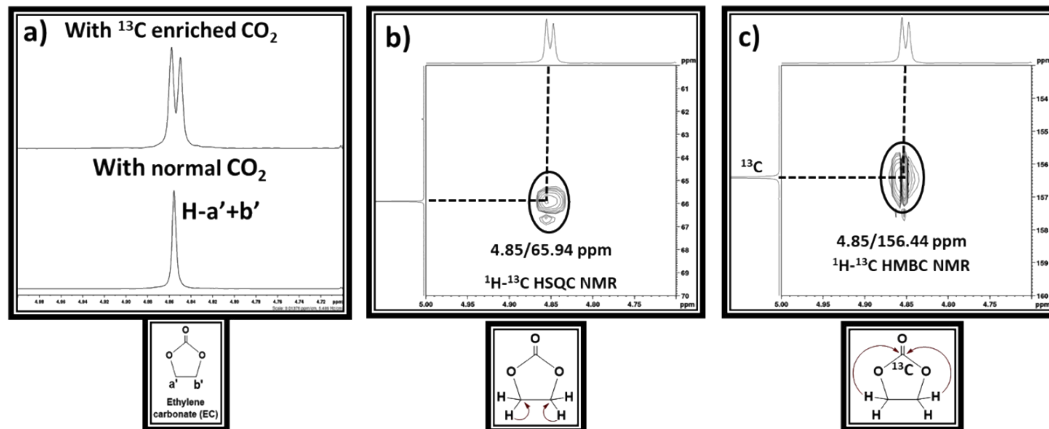


Figure S3.

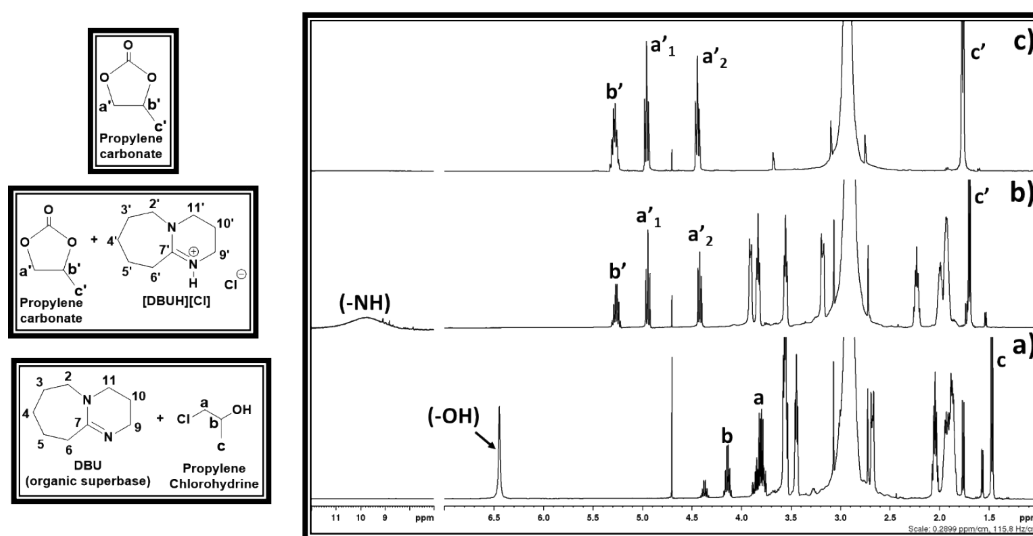


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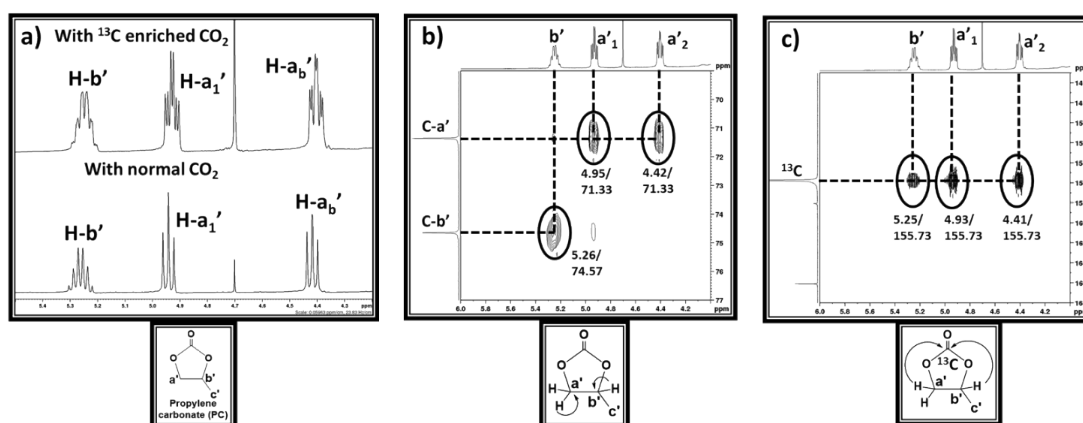


Figure S5

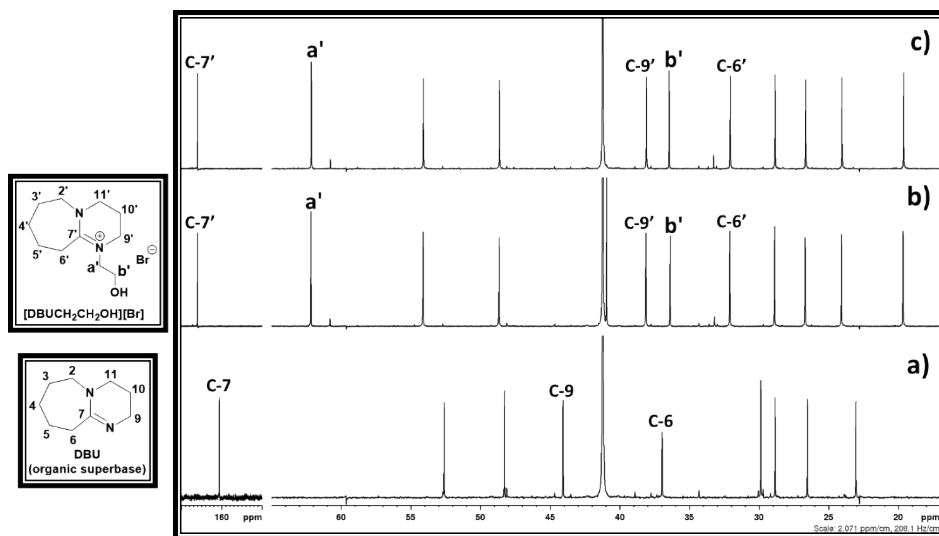


Figure S6

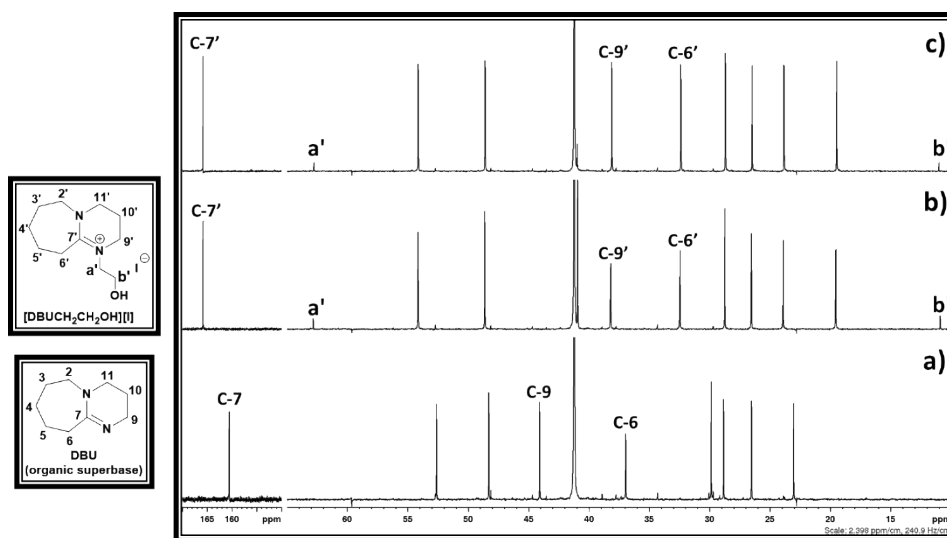


Figure S7

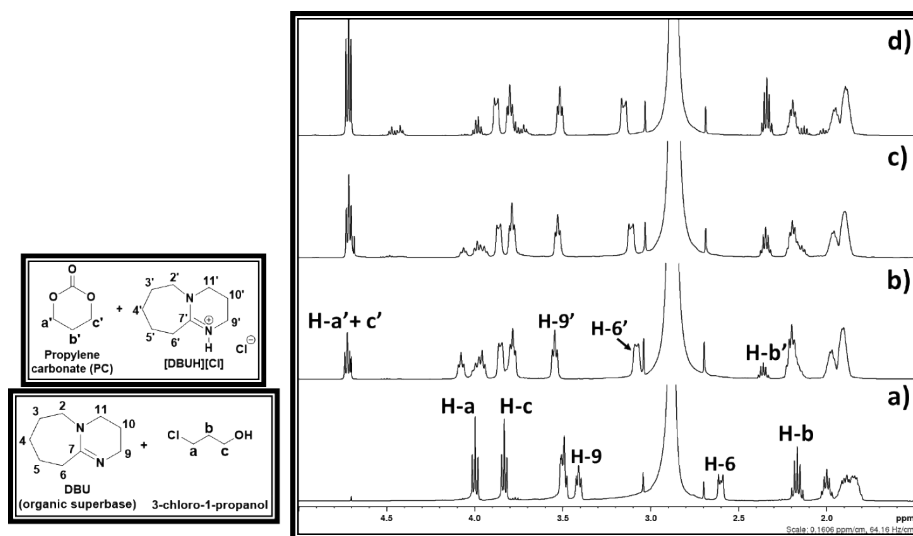


Figure S8

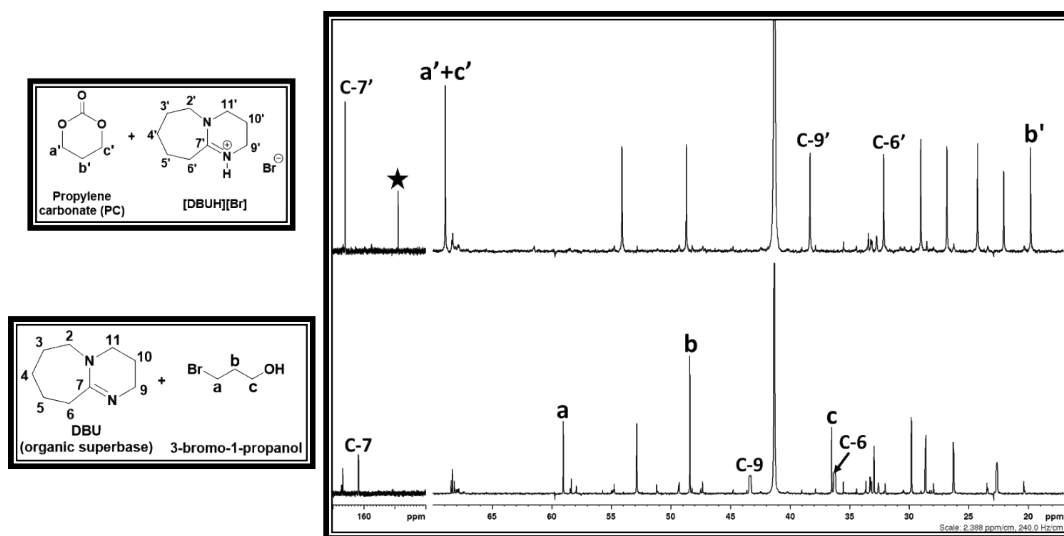


Figure S9.

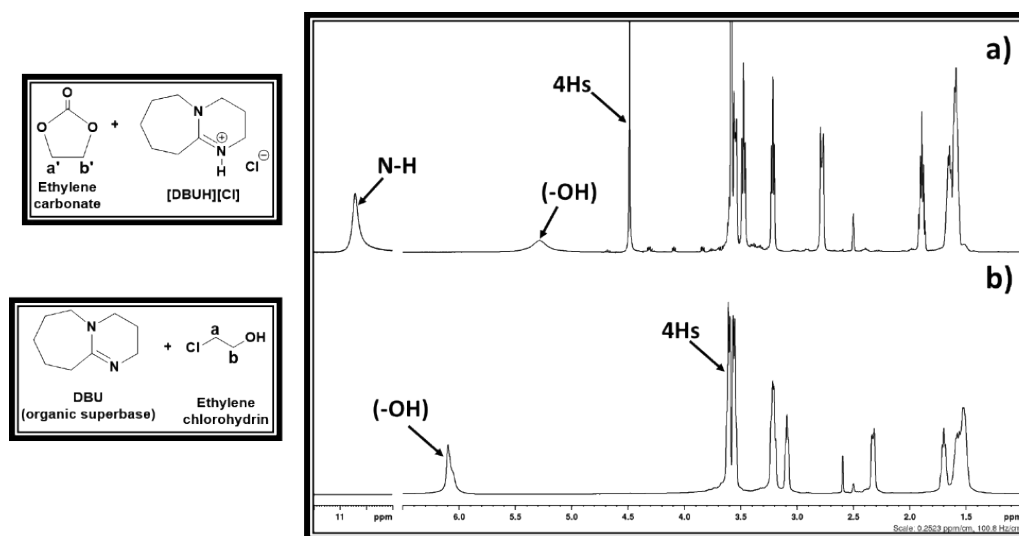


Figure S10.

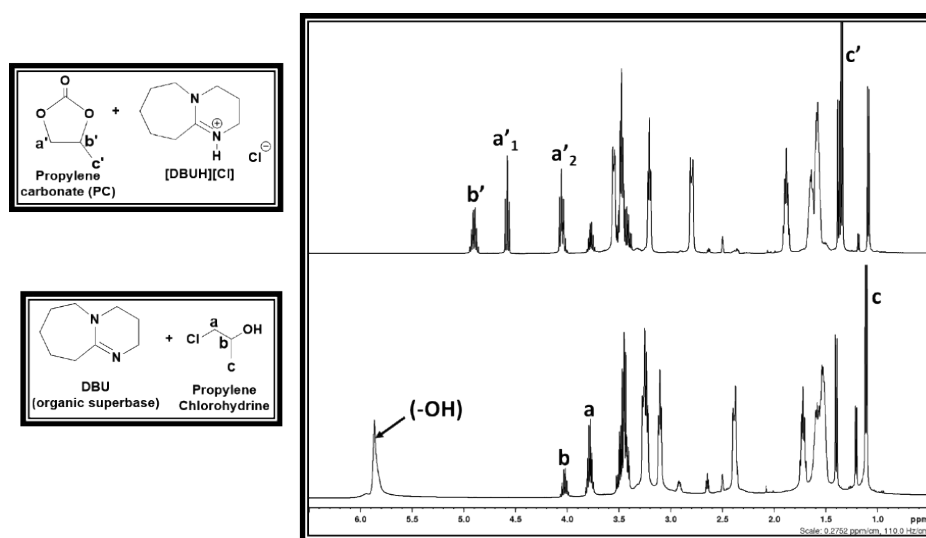


Figure S11.

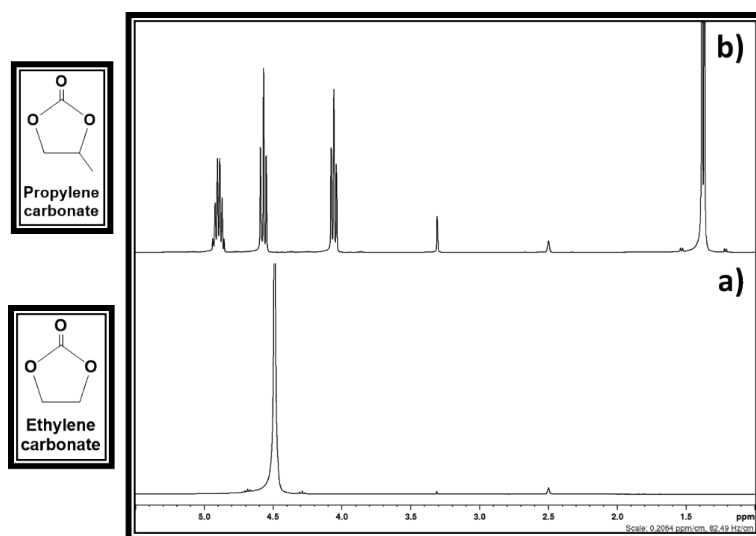


Figure S12.

