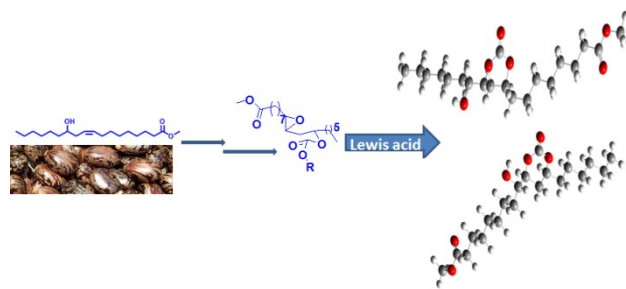


SUPPLEMENTARY INFORMATION

Lewis-Acid Catalyzed Synthesis and Characterization of Novel Castor Fatty Acid-Based Cyclic Carbonates

Naganna Narra^{a,c}, Badari Narayana Prasad Rachapudi^{a,c}, Sahithya Phani babu Vemulapalli^{b,c} and Padmaja V. Korlipara^{a,c} *



*

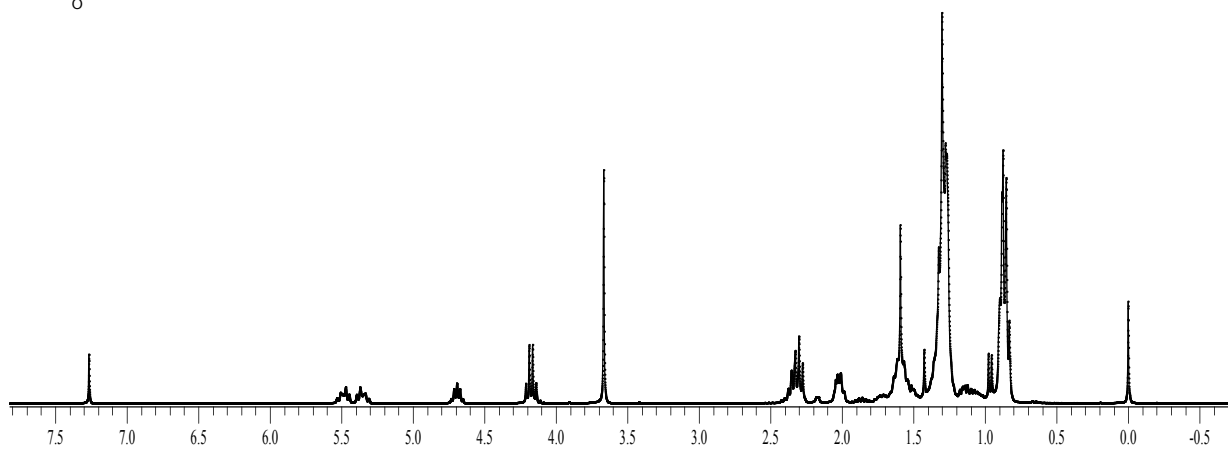
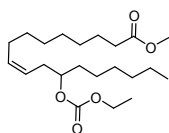


Figure S1. ¹H NMR spectrum of **2b**.

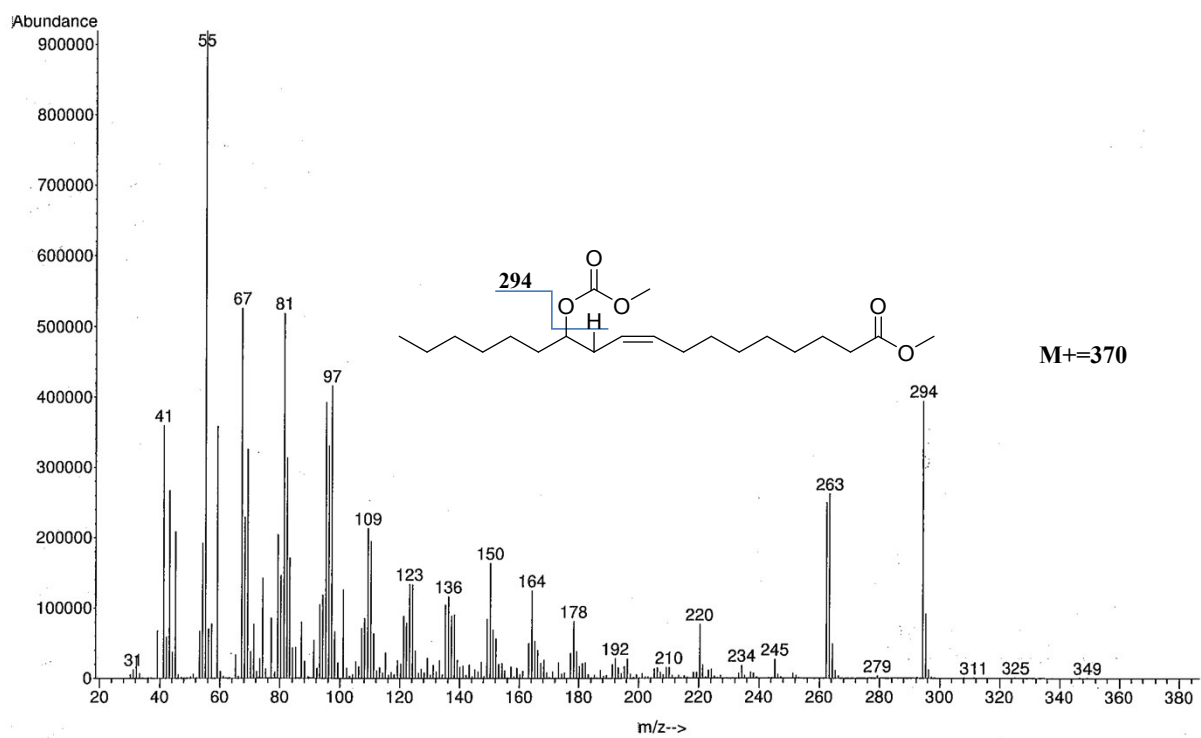


Figure S2. The mass spectrum of **2a**

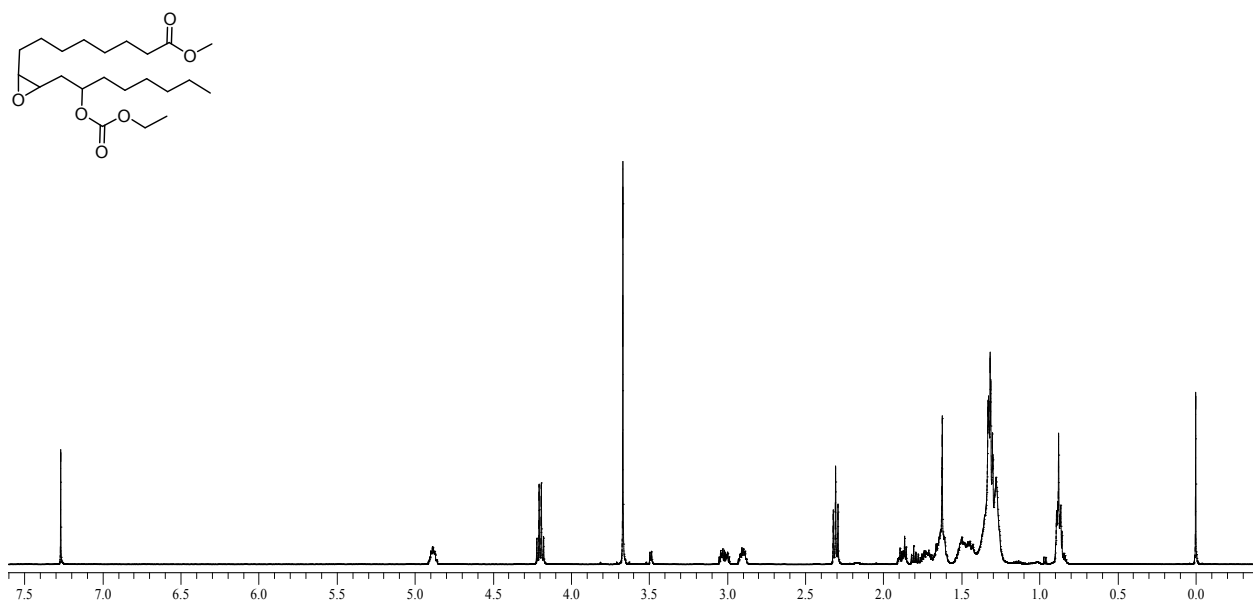


Figure S3. ^1H NMR spectrum of **3b**.

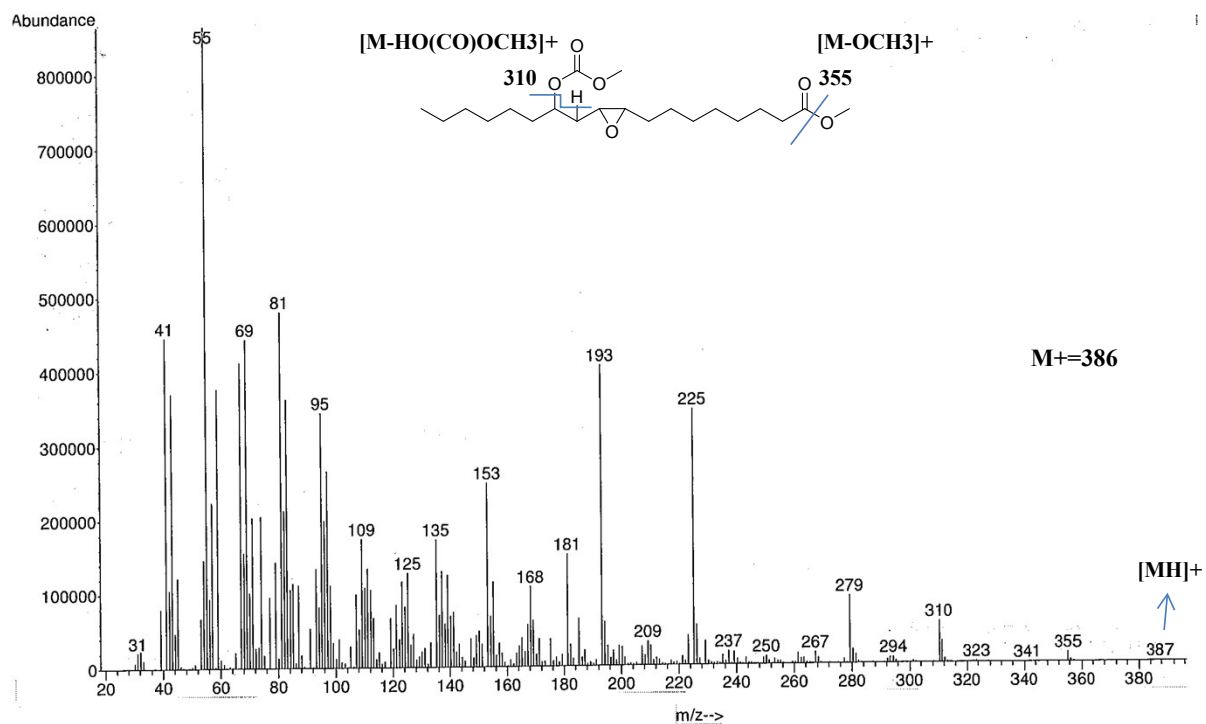


Figure S4. The mass spectrum of 3a

		Five anti (SSR) stabilized by 15 kJ/mol
5a <i>syn</i> (RSR) -1235.1990 a.u. -OC(O)O-bond angle 110.14°	5a <i>anti</i> (SSR) -1235.2019 a.u. -OC(O)O-bond angle 110.12°	
5b <i>syn</i> (SSS) -1235.1960 a.u. -OC(O)O-bond angle 118.57°	5b <i>anti</i> (SRS) -1235.1891 a.u. -OC(O)O-bond angle 118.31°	

Figure S5. Energy profiles calculated for five and six membered cyclic carbonates (Red coloured are stable structures).

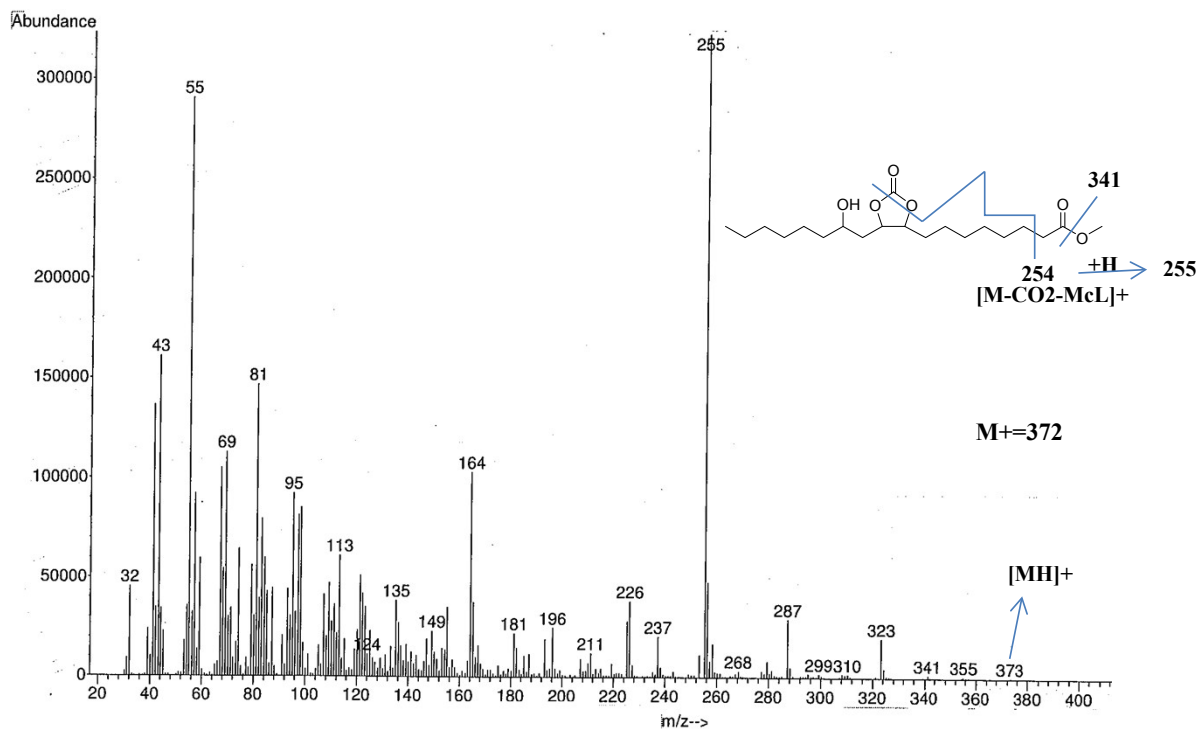


Figure S6. The mass spectrum of 5

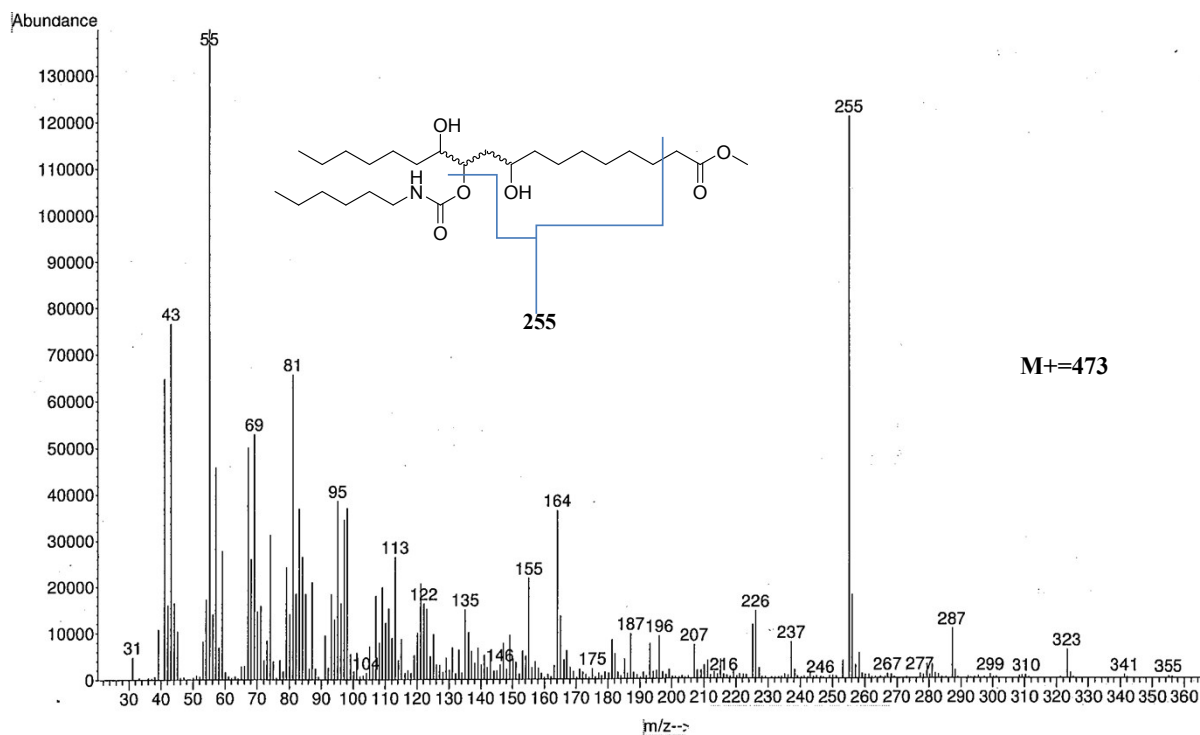


Figure S7. The mass spectrum of 6

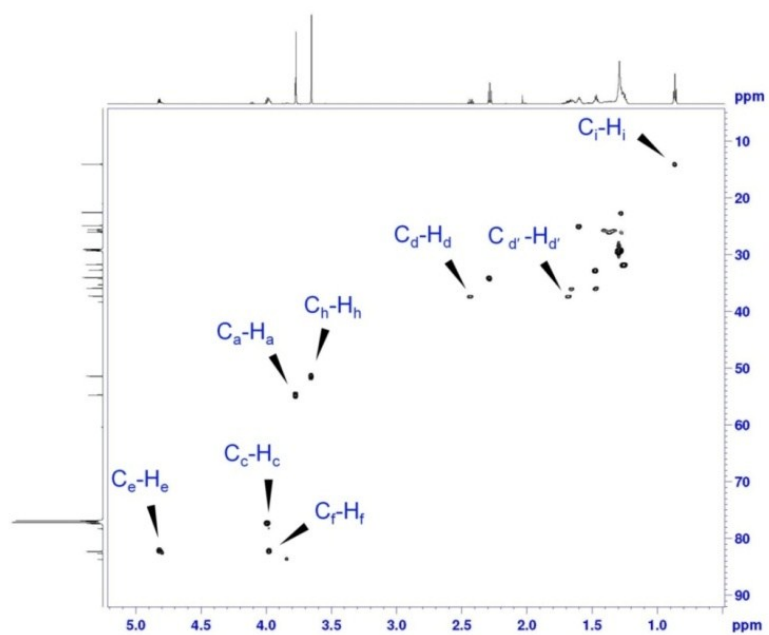


Figure S8. ^{13}C - ^1H HSQC spectrum of **4a** (CDCl_3 , 298 K, Bruker Avance 700 MHz).

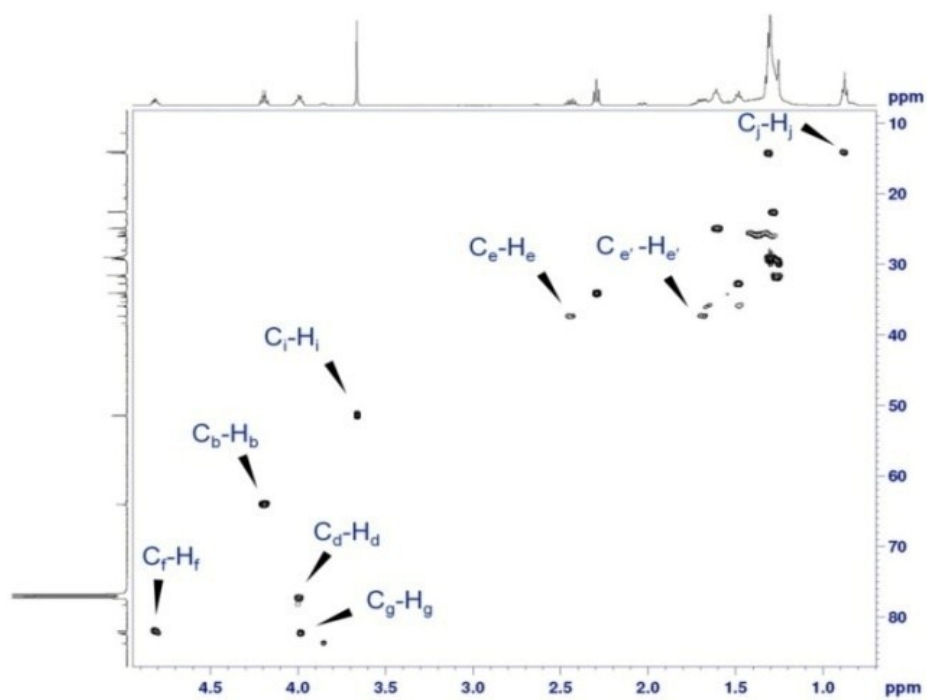


Figure S9. ^{13}C - ^1H HSQC spectrum of **4b** (CDCl_3 , 298 K, Bruker Avance 500 MHz).

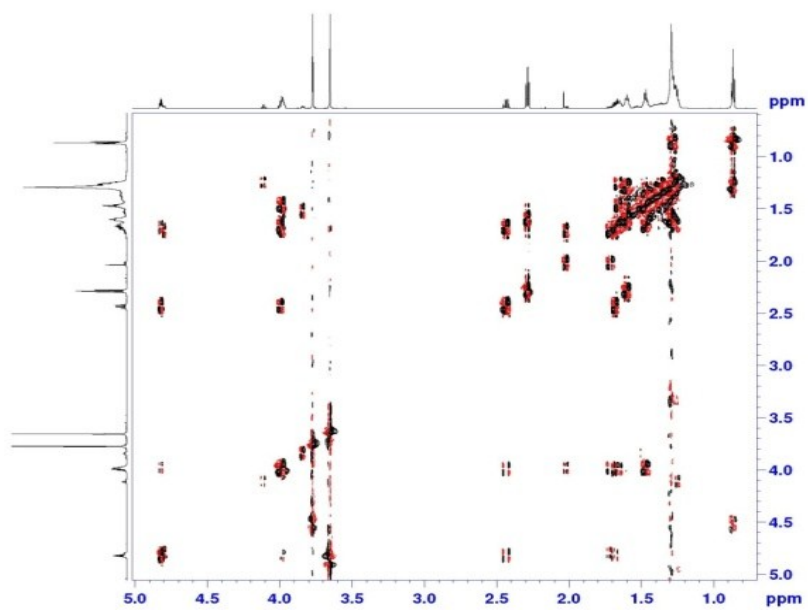


Figure S10. DQFCOSY spectrum of **4a** (CDCl_3 , 298 K, Bruker Avance 700 MHz).

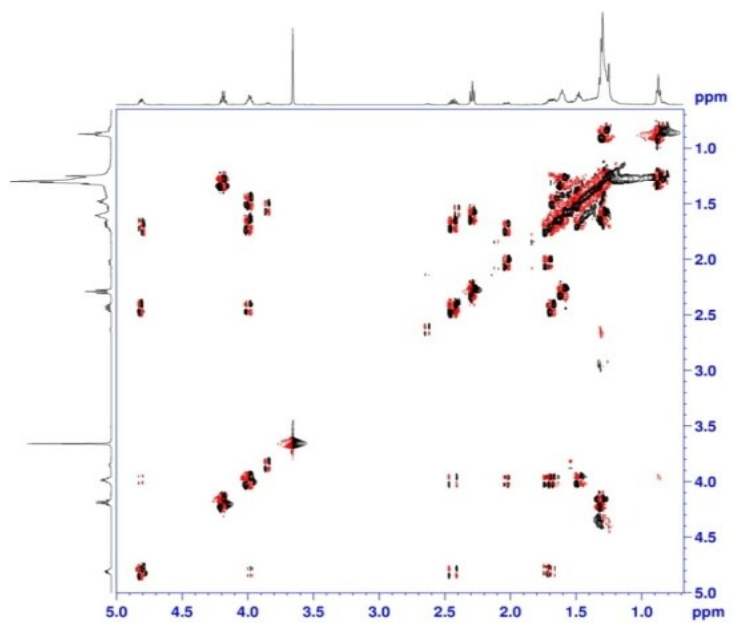


Figure S11. DQFCOSY spectrum of **4b** (CDCl_3 , 298 K, Bruker Avance 500 MHz).

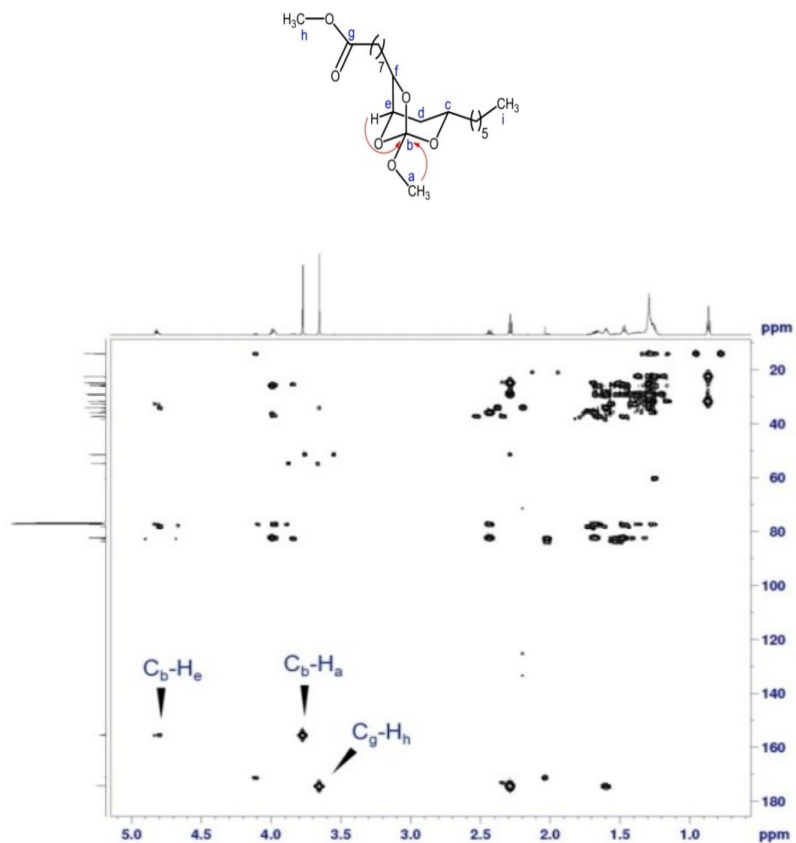


Figure S12. ^{13}C - ^1H HMBC spectrum of **4a** (red arrows) (CDCl_3 , 298K, Bruker Avance 700 MHz).

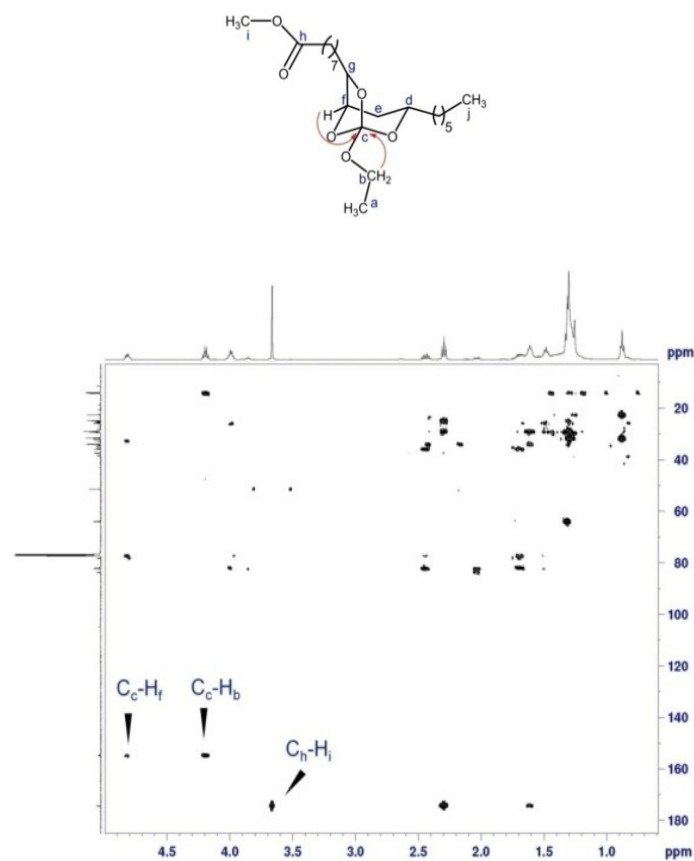


Figure S13. ^{13}C - ^1H HMBC spectrum of **4b** (red arrows)(CDCl_3 , 298 K, Bruker Avance 500 MHz).

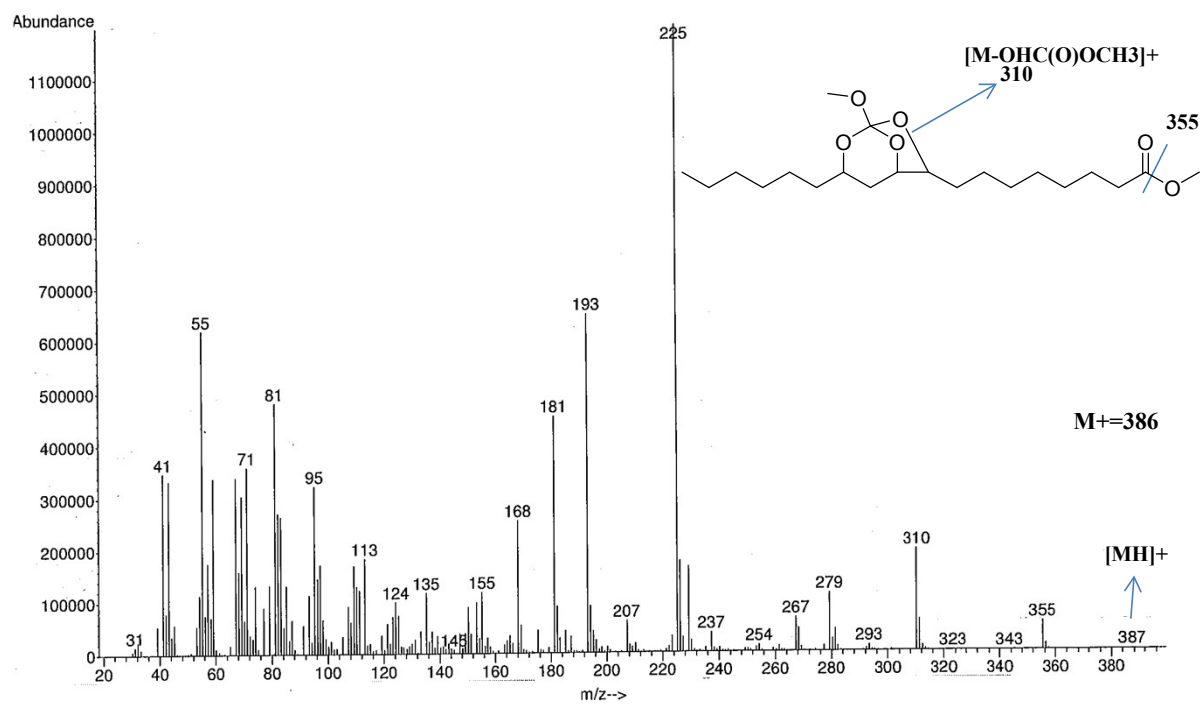
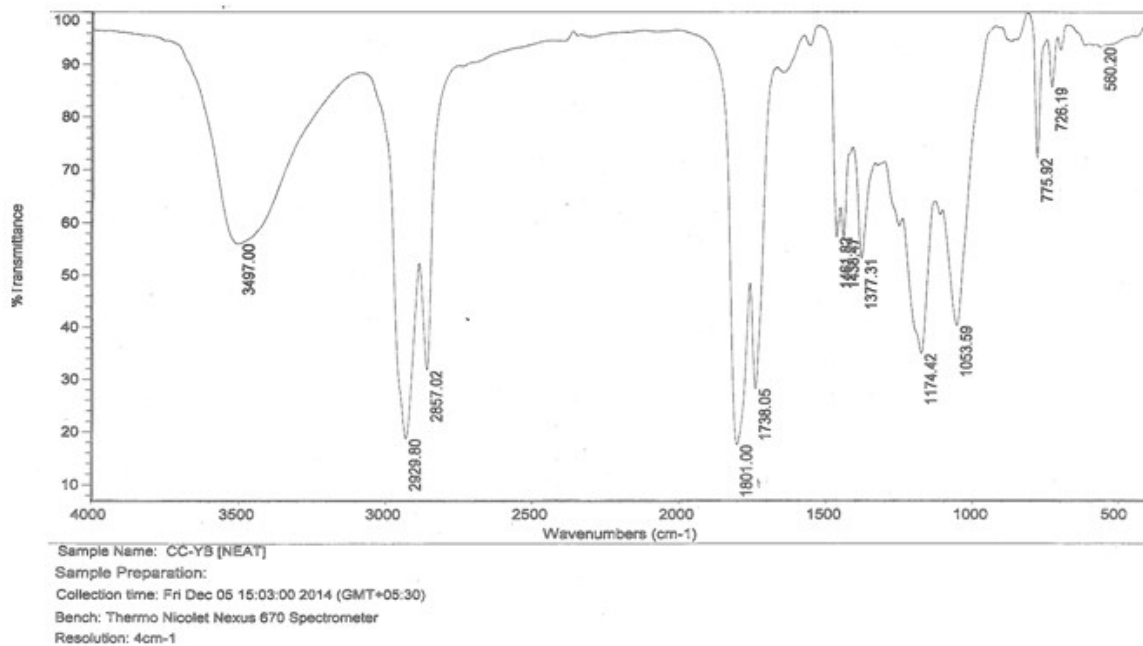
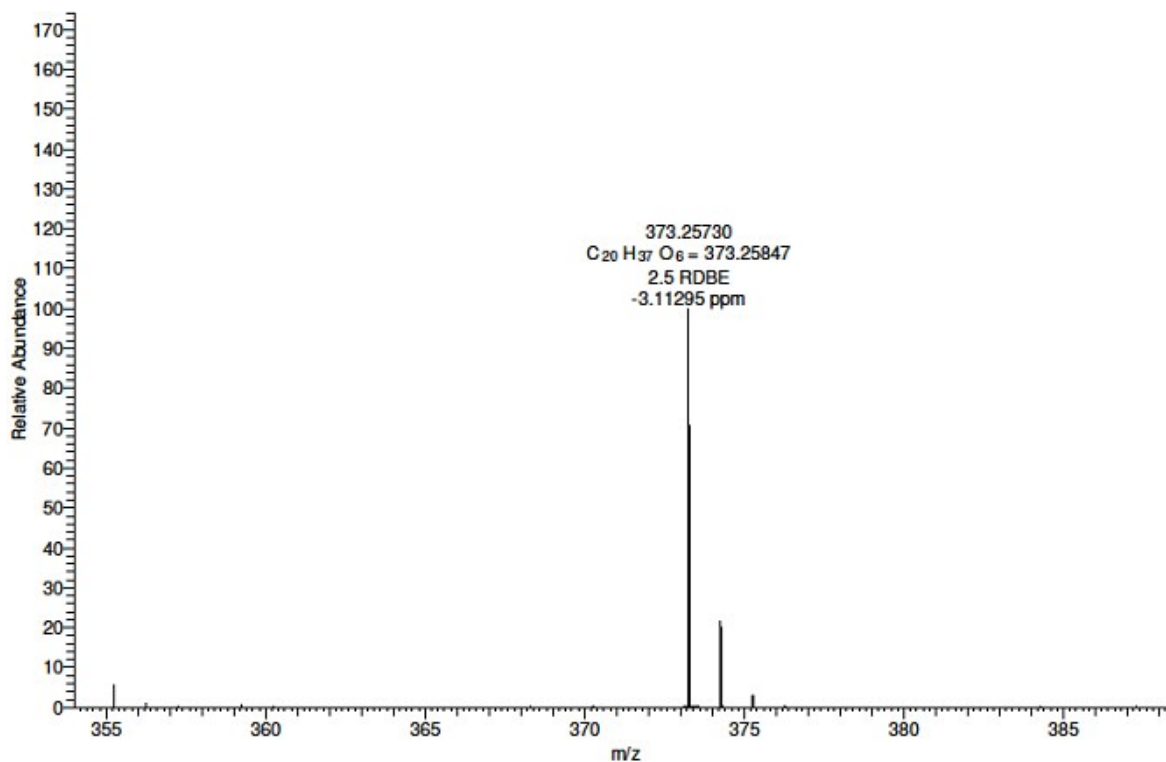


Figure S14. The mass spectrum of **4a**



FT-IR spectrum of cyclic carbonates



HRMS Spectrum of cyclic carbonates