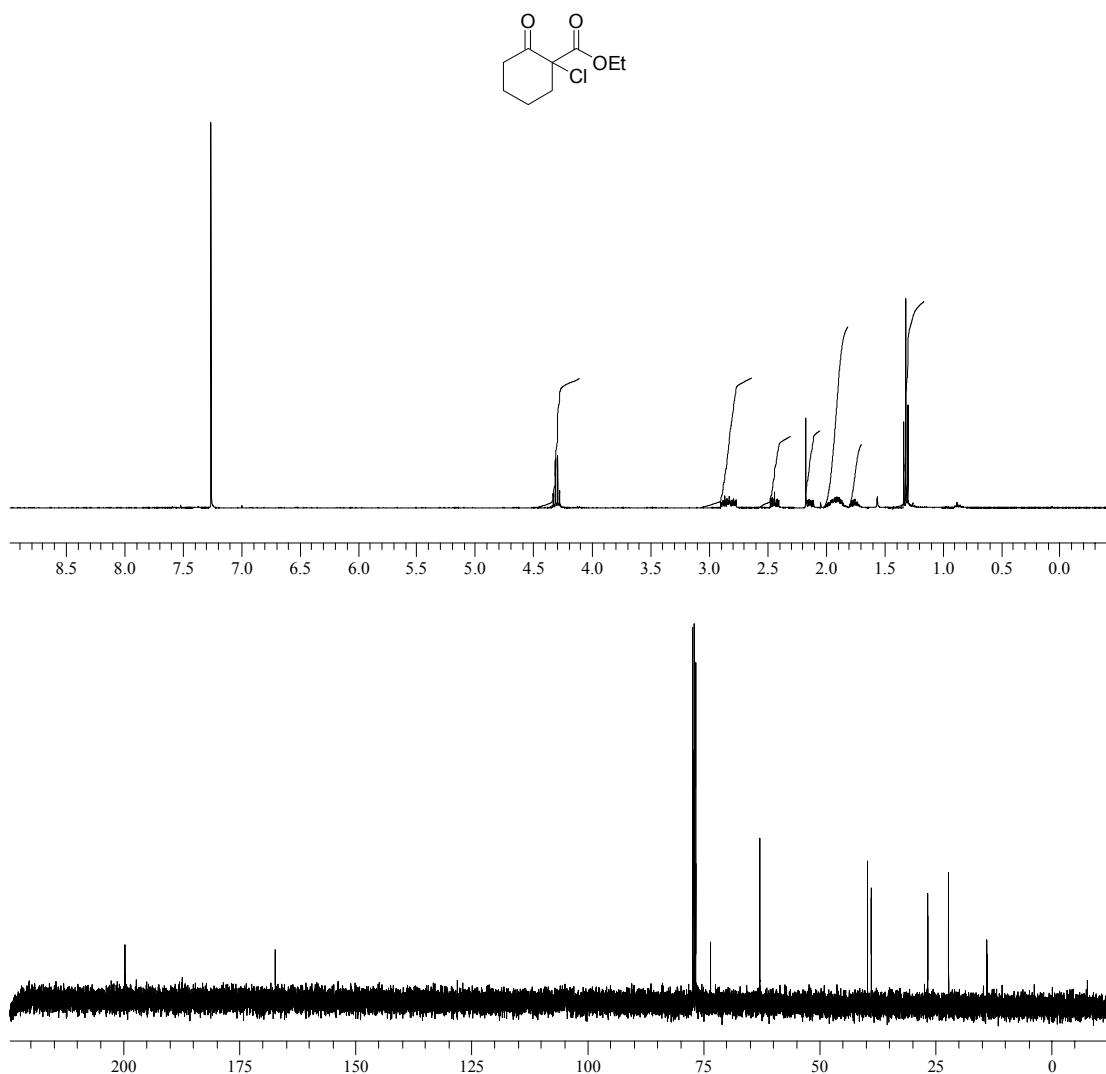


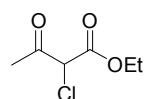
## Selenocatalytic $\alpha$ -Halogenation

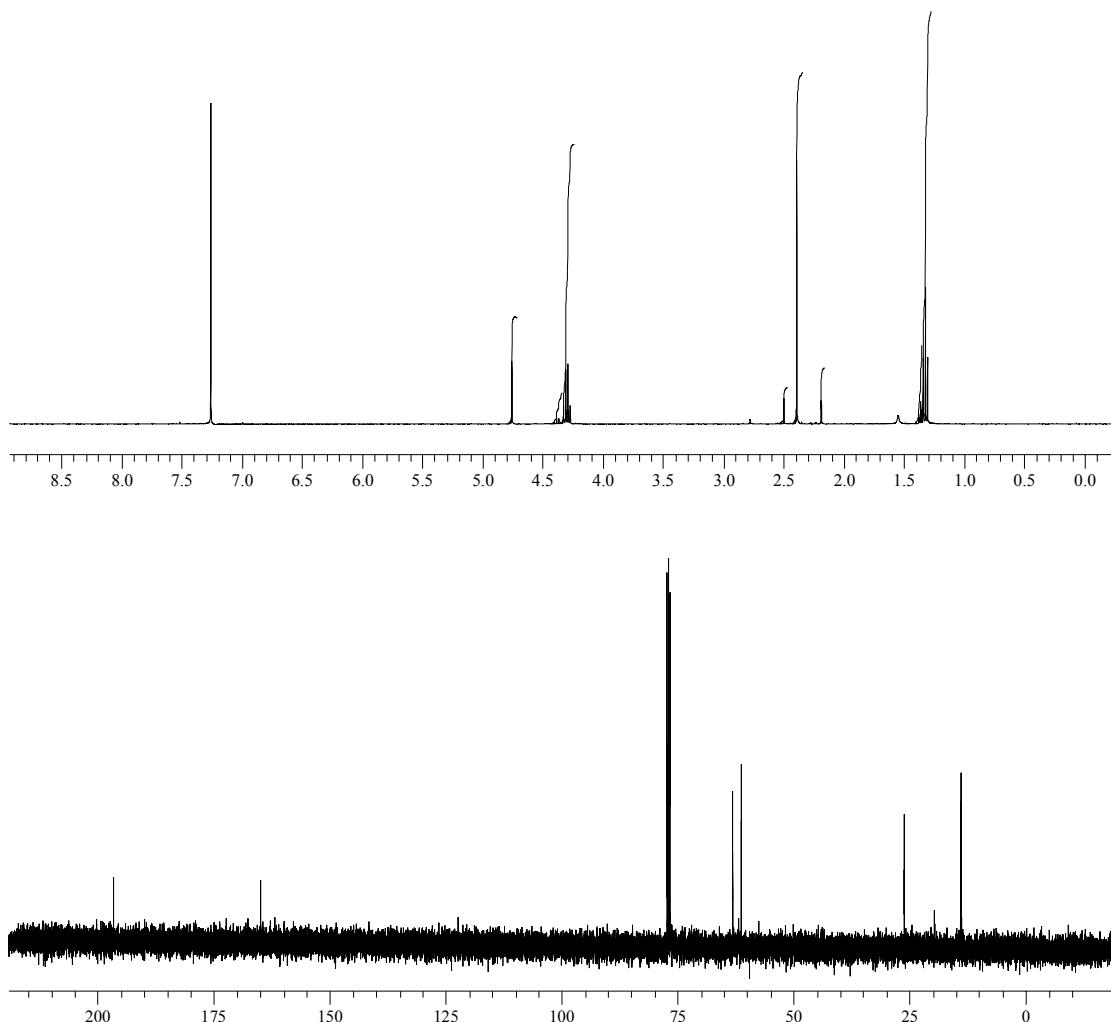
Chao Wang and Jon Tunge

**Supporting Information:**  $^1\text{H}$  and  $^{13}\text{C}$  NMR spectra of all products.



**3a:**  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ )  $\delta$  4.30 (q,  $J = 7.1$  Hz, 2H:  $\text{OCH}_2$ ), 2.83 (m, 2H:  $\text{ClCCH}_2$ ), 2.45 (m, 1H:  $\text{CH}_2$ ), 2.14 (m, 1H:  $\text{CH}_2$ ), 2.01-1.82 (m, 3H:  $\text{CH}_2$ ), 1.75(m, 1H:  $\text{CH}_2$ ), 1.31(t,  $J = 7.1$  Hz, 3H:  $\text{CH}_3$ );  $^{13}\text{C}$  NMR (75 MHz,  $\text{CDCl}_3$ )  $\delta$  199.67 ( $\text{C=O}$ ), 167.22 ( $\text{OC=O}$ ), 73.47 ( $\text{ClC}$ ), 66.82 ( $\text{OCH}_2$ ), 39.60 ( $\text{C=OCH}_2$ ), 38.82 (2.83) ( $\text{CH}_2$ ), 26.67 (ambiguous  $\text{CH}_2$ ), 22.14 (ambiguous  $\text{CH}_2$ ), 13.87( $\text{CH}_3$ ).





**3b:** <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) δ 4.76 (s, 1H: ClCH), 4.30 (q, *J* = 7.1 Hz, 2H: OCH<sub>2</sub>), 2.39 (s, 3H: CH<sub>3</sub>C=O), 1.32 (t, *J* = 7.1 Hz, 3H: CH<sub>3</sub>); <sup>13</sup>C NMR (75 MHz, CDCl<sub>3</sub>) δ 199.61 (C=O), 164.92 (OC=O), 63.14 (ClC), 61.31 (OCH<sub>2</sub>), 26.21 (O=CCH<sub>3</sub>), 13.89 (CH<sub>3</sub>).

