Supplementary Information

A Green Method for the Self-aldol Condensation of Aldehydes Using Lysine

Yutaka Watanabe,* Kazue Sawada, Minoru Hayashi

Department of Materials Science and Biotechnology, Graduate School of Science and Engineering, Ehime University, Matsuyama 790-8577, Japan

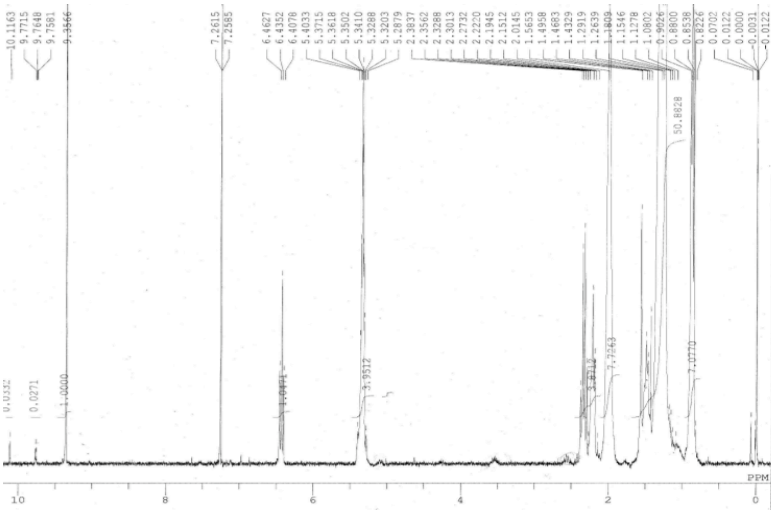
Fax: (+81)89-927-9921; E-mail: wyutaka@dpc.ehime-u.ac.jp

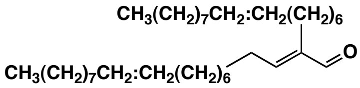
Spectral data (^{1}H- and ^{13}C-NMR)

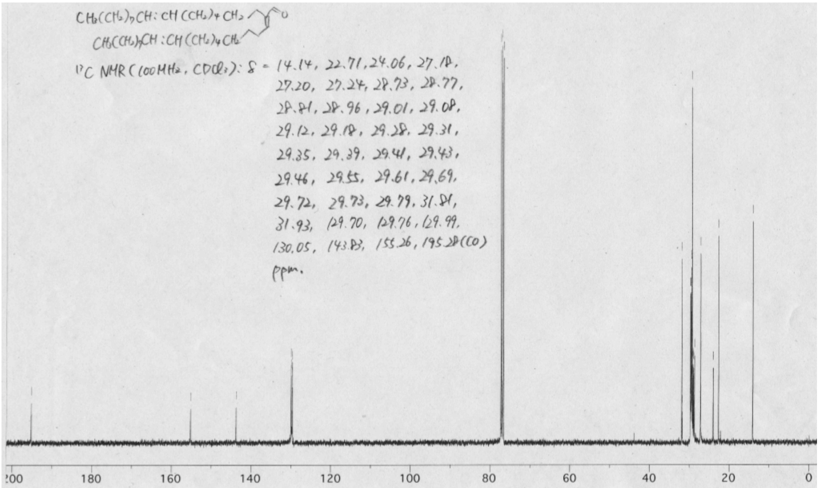
	^{1}H- NMR (270 MHz, $CDCl_3$) δ ppm	^{13}C-NMR (100 MHz, $CDCl_3$) δ ppm
Table 1, Entry 1	0.88 (t, *J*=6.6 Hz, 6 H), 1.41-1.89 (complex, 38H), 1.50 (br, 4H), 2.01 (complex, 8H), 2.22 (br, 2H), 2.34 (dt, *J*=7.4 Hz, 2H), 5.35 (complex, 4H), 6.44 (t, *J*=7.4 Hz, 1H), 9.36 (s, 1H)	14.26, 22.81, 22.83, 24.18, 27.31, 27.32, 27.37, 28.86, 28.89, 28.93, 29.08, 29.14, 29.25, 29.30, 29.40, 29.44, 29.47, 29.51, 29.53, 29.56, 29.58, 29.68, 29.73, 29.81, 29.84, 29.86, 29.91, 31.94, 32.06, 129.83, 129.88, 130.11, 130.18, 143.96, 155.38, 195.40
Table 1, Entry 2	0.88 (t, *J*=6.4 Hz, 6H), 1.27 (brs, 24H), 1.43-1.57 (complex, 2H), 2.22 (t, *J*=7.4 Hz, 2H), 2.35 (q, *J*=7.4 Hz, 2H), 6.43 (t, *J*=7.4 Hz, 1H), 9.36 (s, 1H)	14.1, 22.7, 24.1, 28.7, 28.8, 29.0, 29.3, 29.3, 29.4, 29.5, 29.5, 29.5, 29.6, 29.7, 30.3, 31.9, 34.4, 143.9, 155.4, 195.3
Table 1, Entry 3	0.87 (t, *J*=6.7 Hz, 6H), around 1.28 (complex, 20H), 1.50 (quintet, *J*=6.7 Hz, 2H), 2.22 (t, *J*=7.2 Hz, 2H), 2.35 (quartet, *J*=7.3 Hz, 2H), 6.44 (t, *J*=7.4 Hz, 1H), 9.36 (s, 1H)	14.11, 22.67, 24.05, 28.72, 28.81, 28.96, 29.14, 29.22, 29.40, 29.42, 29.66, 31.83, 31.86, 143.84, 155.40, 195.38
Table 1, Entry 4	0.88 (t, *J*=6.7 Hz, 3H), 0.89 (t, *J*=6.9 Hz, 3H), around 1.29 (complex, 16H), 1.50 (quintet, *J*=7.3 Hz, 2H), 2.22 (t, *J*=7.2 Hz, 2H), 2.35 (quartet, *J*=7.4 Hz, 2H), 6.44 (t, *J*=7.4 Hz, 1H), 9.36 (s, 1H)	14.19, 22.72, 22.75, 24.16, 28.83, 28.88, 29.06, 29.21, 29.47, 29.48, 31.78, 31.87, 143.97, 155.45, 195.44
Table 1, Entry 5	0.88 (t, *J*=6.9 Hz, 3H), 0.90 (t, *J*=6.6 Hz, 3H), around 1.31 (complex, 10H), around 1.46 (brs, 2H), 2.23 (t, *J*=7.3 Hz, 2H), 2.35 (dt, *J*=7.4 Hz, 2H), 6.44 (t, *J*=7.4 Hz, 1H), 9.36 (s, 1H)	14.08, 14.12, 22.58, 22.65, 24.08, 28.55, 28.77, 29.03, 29.17, 31.72, 31.94, 143.94, 155.41, 195.38
Table 1, Entry 6	0.90 (t, *J*=6.9 Hz, 3H), 0.91 (t, *J*=6.5 Hz, 3H), 1.25-1.59 (m, 10H), 2.17-2.39 (m, 4H), 6.44 (t, *J*=7.4 Hz, 1H), 9.36 (s, 1H)	13.97, 14.03, 22.55, 22.85, 23.86, 28.47, 28.98, 31.04, 31.65, 143.90, 155.51, 195.46
Table 1, Entry 7	2.70-2.79 (m, 4H), 3.58 (s, 2H), 6.61 (t, *J*=6.9 Hz, 1H), 7.09-7.32 (m, 10H), 9.45 (s, 1H)	29.58, 30.98, 34.35, 126.04, 126.32, 128.11, 128.25, 128.30, 128.40, 128.54, 128.96, 138.99, 140.38, 142.75, 154.70, 194.52
Table 1, Entry 8 (diastereomeric mixture)	0.88 (t, *J*=6.9 Hz, 6H), 1.25-1.39 (m, 39H), 1.45 (d, *J*=1.3 Hz, 3H), 1.51-1.59 (m, 4H), 2.38-2.69 (m, 5 H), 2.84-3.00 (m, 2 H), 3.94 and 4.06 (1:2.9, q, *J*=7.3 Hz, 1H), 6.61 & 6.62 (1:1, t, *J*=7.3 Hz, 1H) and 6.74 & 6.75 (1:1, t, *J*=7.3 Hz, 1H), 9.39 and 10.06 (s, 1H)	14.14, 19.92, 19.95, 21.43, 21.49, 22.71, 28.56, 29.03, 29.08, 29.26, 29.29, 29.37, 29.52, 29.55, 29.63, 29.68, 29.78, 30.65, 30.73, 31.94, 32.38, 32.42, 34.03, 36.06, 36.18, 39.26, 39.33, 145.25 and 145.28, 152.69 and 152.74, 193.49, 193.50
Table 1, Entry 9	0.88 (t, *J*=6.6 Hz, 6H), 1.26-1.30 (complex, 54H), 1.47-1.52 (complex, 4H), 2.22 (t, *J*=7.0 Hz, 2H), 2.34 (quartet, *J*=7.4 Hz, 2H), 6.43 (t, *J*=7.4 Hz, 1H), 9.36 (s, 1H)	14.27, 22.85, 24.18, 28.86, 28.93, 29.09, 29.52, 29.56, 29.58, 29.61, 29.65, 29.66, 29.70, 29.76, 29.82, 29.86, 32.09, 143.99, 155.48, 195.47
Table 2, Entry 6	0.90 (t, *J*=7.3 Hz, 3H), 0.94 (t, *J*=7.0 Hz, 3H), 1.25-1.52 (complex, 6H), 2.22 (t, *J*=7.6 Hz, 2H), 2.36 (dt, *J*=7.2 Hz, 2H), 6.46 (t, *J*=7.4 Hz, 1H), 9.36 (s, 1H)	13.96, 14.15, 22.06, 22.58, 26.05, 28.78, 30.93, 143.66, 155.62, 195.43
Table 2, Entry 7	0.94 (t, *J*=7.5 Hz, 3H), 0.96 (t, *J*=7.4 Hz, 3H), 1.52 (dq, *J*=7.4 Hz, 2H), 2.24 (q, *J*=7.5 Hz, 2H), 2.33 (t, *J*=7.4 Hz, 2H), 6.43 (t, *J*=7.4 Hz, 1H), 9.34 (s, 1H)	13.36, 13.89, 17.30, 22.01, 30.71, 145.38, 154.60, 195.11

*[1]H- and [13]C-NMR spectra

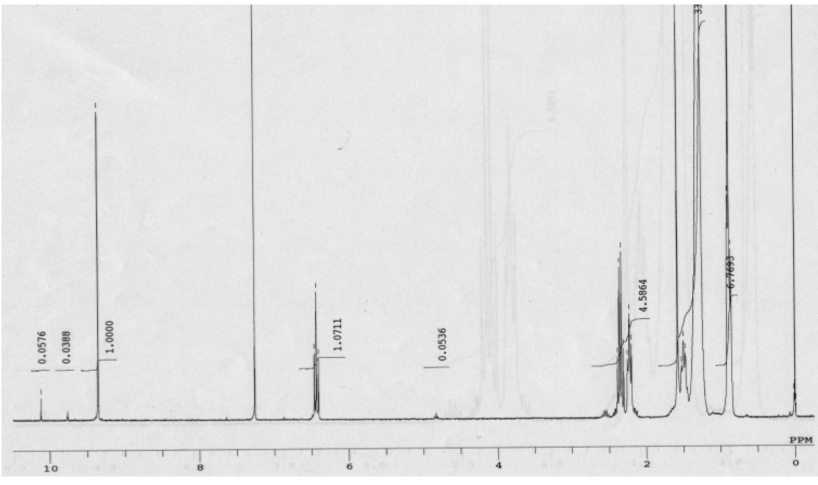
(Table 1, Entry 1)

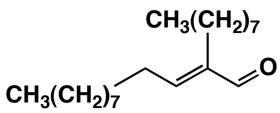


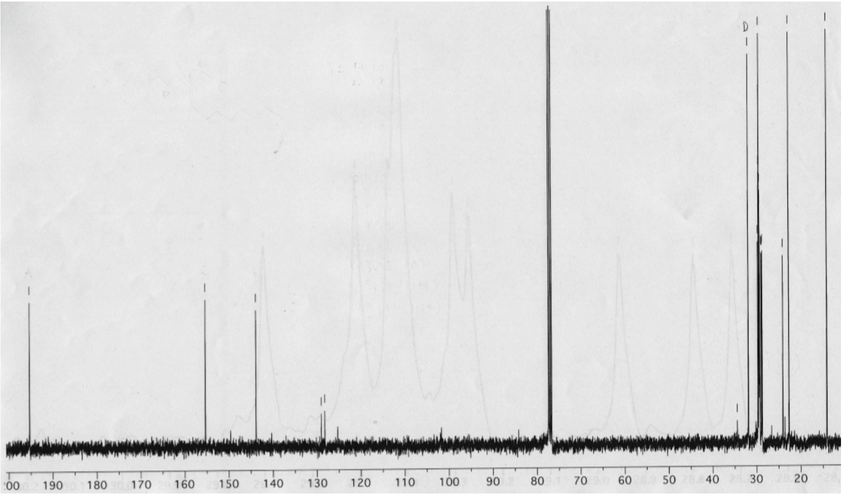




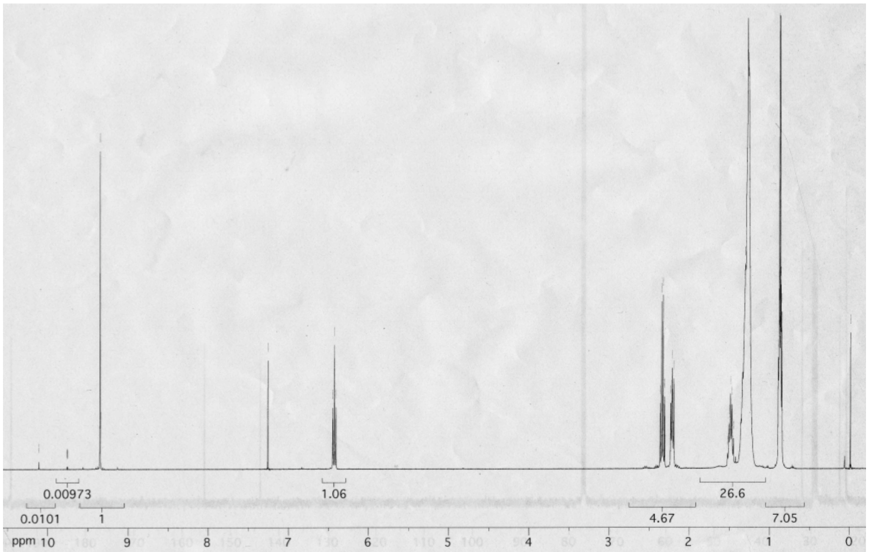
(Table 1, Entry 2)

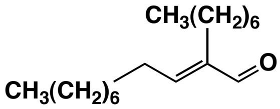


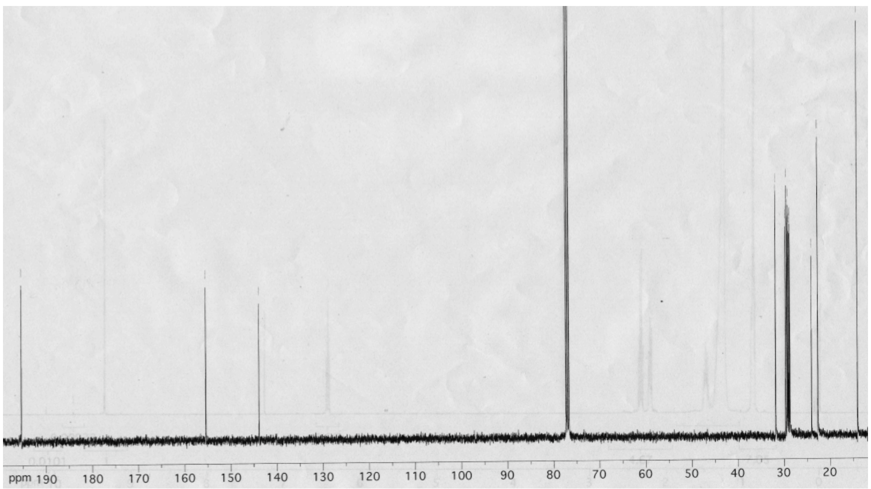




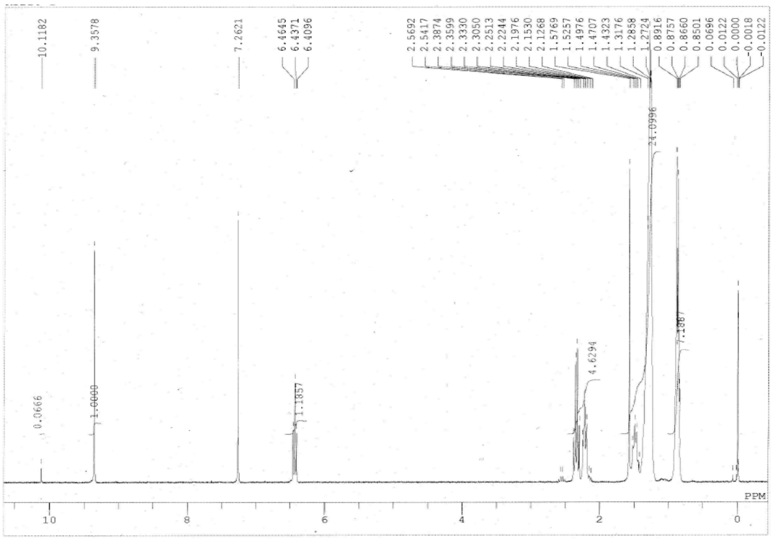
(Table 1, Entry 3)

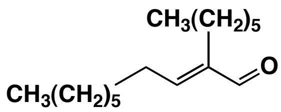


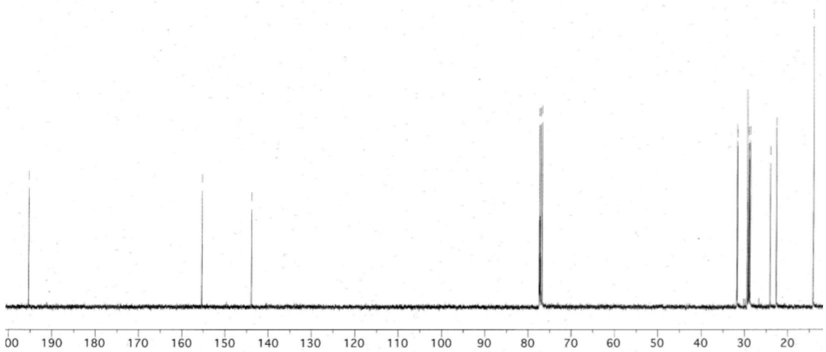




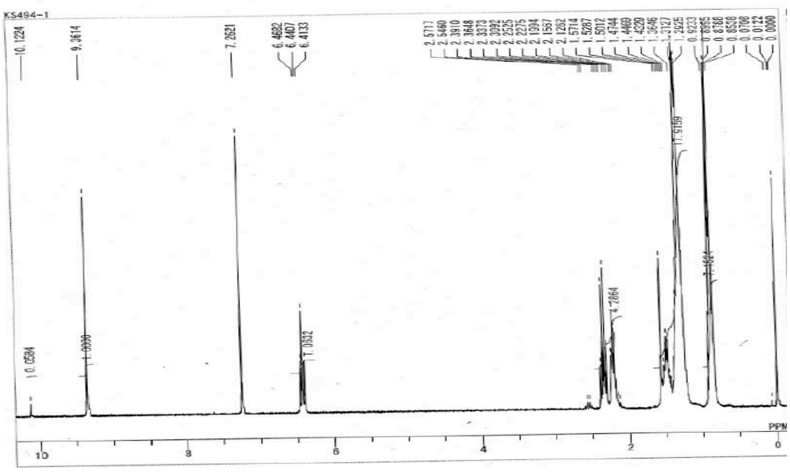
(Table 1, Entry 4)

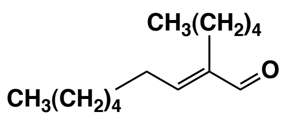


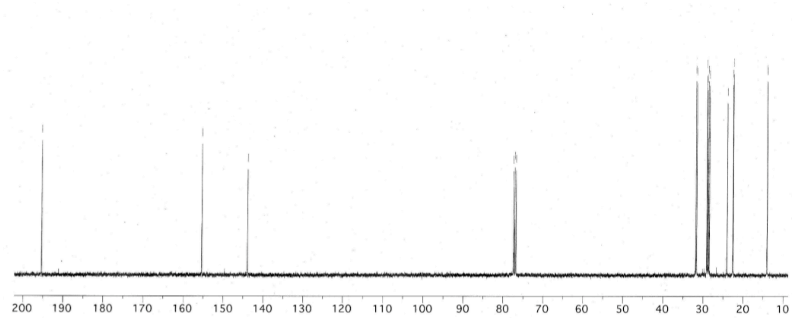




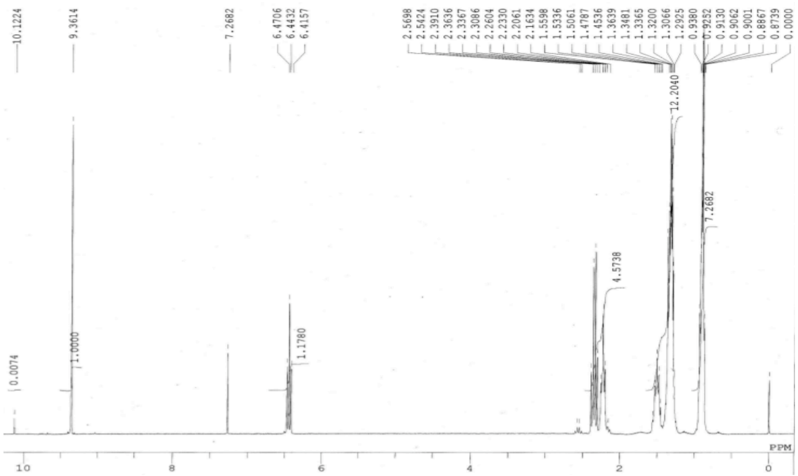
(Table 1, Entry 5)

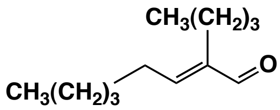


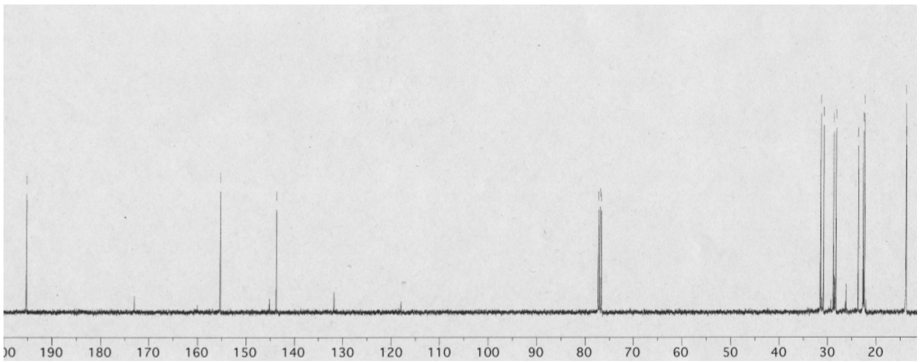




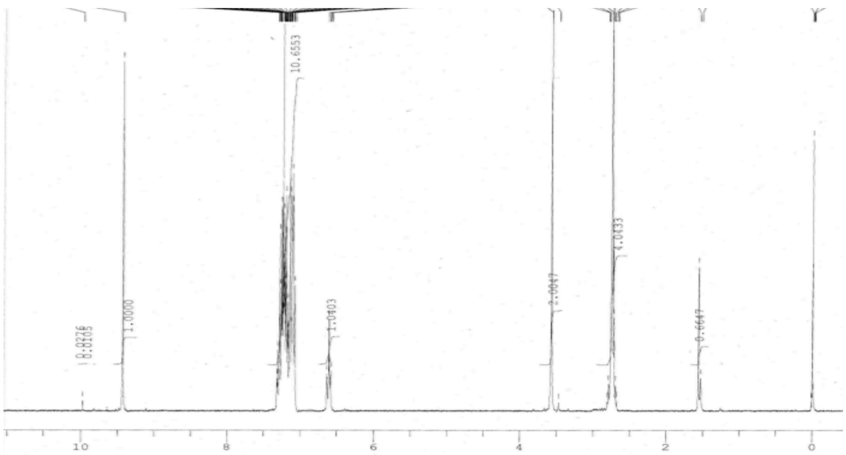
(Table 1, Entry 6)

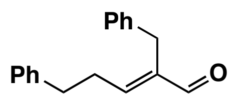


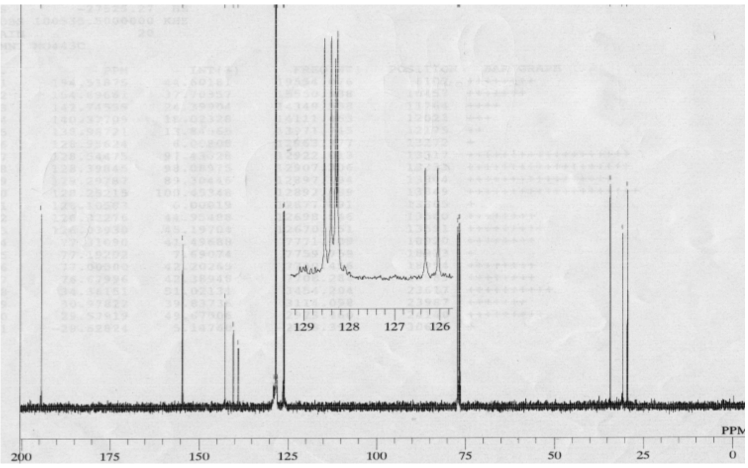




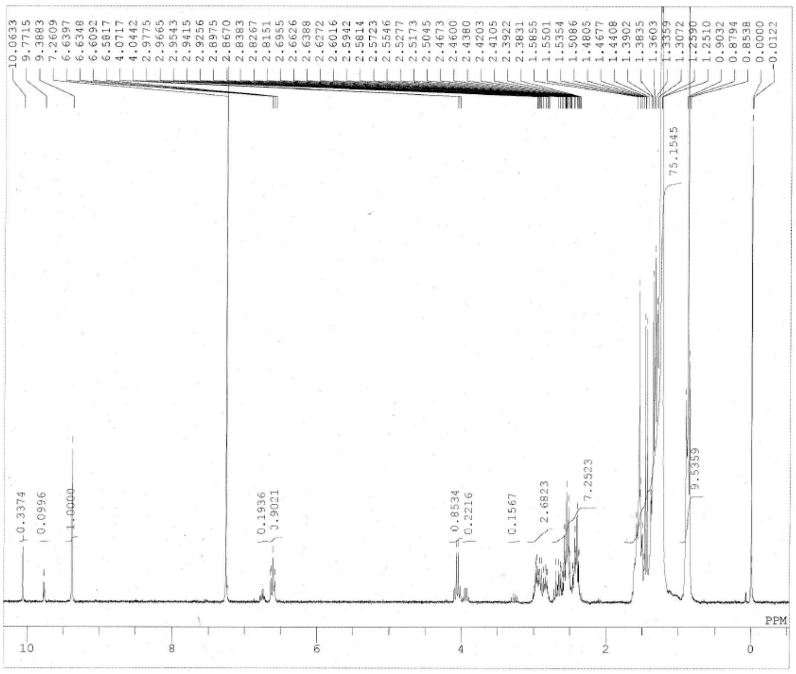
(Table 1, Entry 7)

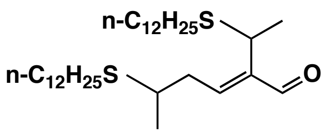


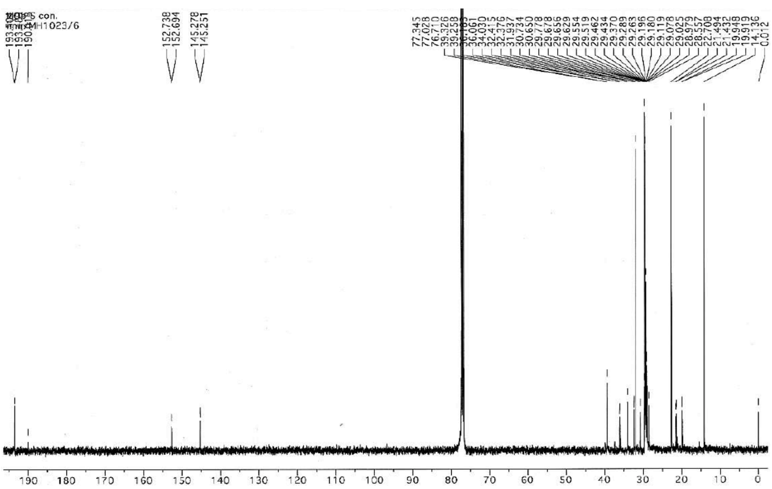




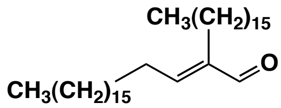
(Table 1, Entry 8)

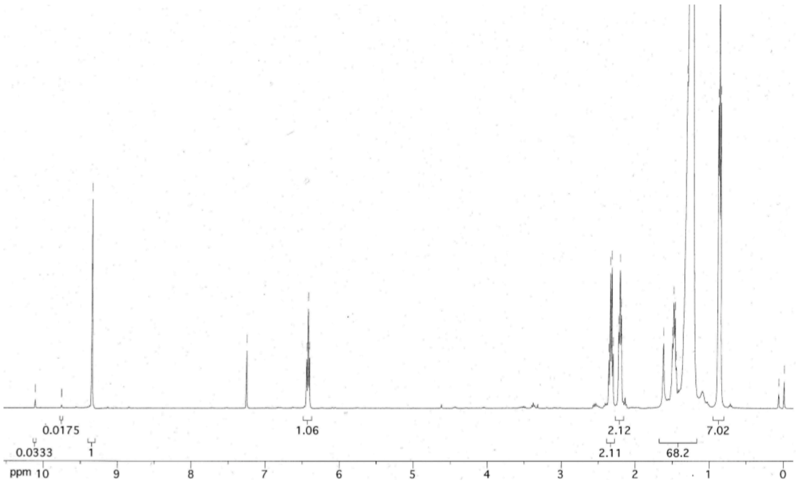


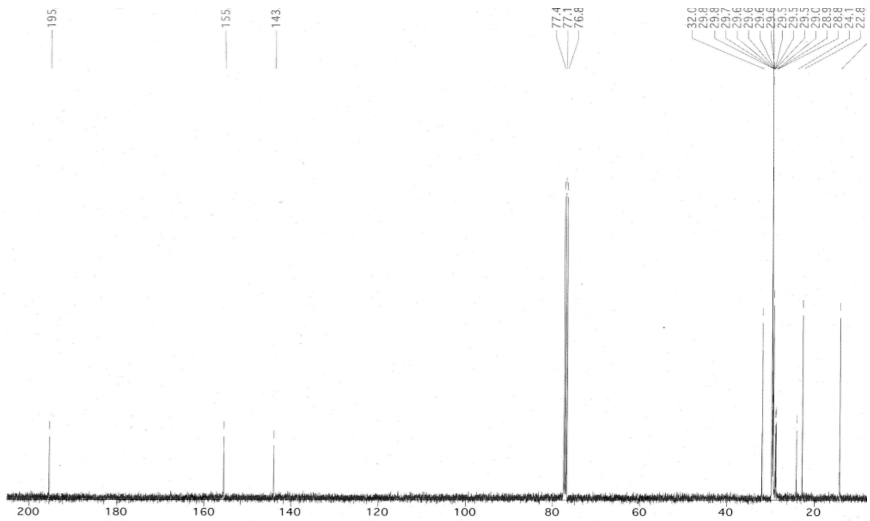




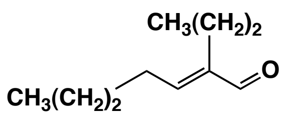
(Table 1, Entry 9)

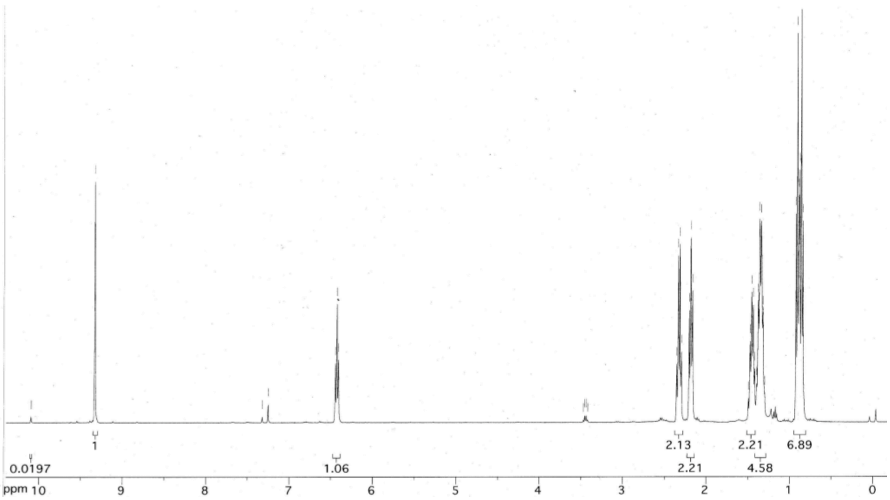


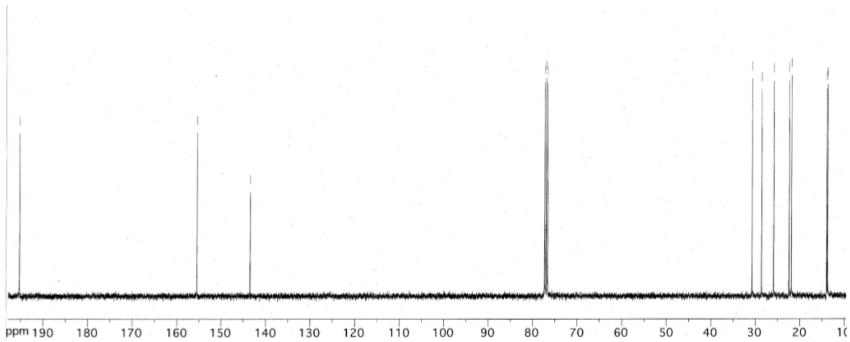




(Table 2, Entry 6)







(Table 2, Entry 7)