

Synthesis of Enantiopure ($\alpha S, \beta S$)- or ($\alpha R, \beta S$)- β -Aminoalcohols by Complete Regioselective Opening of Aminoepoxides by Organolithium Reagents, LiAlH_4 or LiAlD_4 .

José M. Concellón,*^[a] Pablo L. Bernad,^[a] Virginia del Solar^[a] and José Ramón Suárez^[a]

^[a]Departamento de Química Orgánica e Inorgánica,
Facultad de Química, Universidad de Oviedo, Julián
Clavería, 8, 33071 Oviedo, Spain.
Email: jmccg@fq.uniovi.es

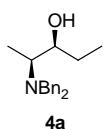
General 3S

^{13}C -RMN of 3, 4, 5, 6, 7 and 8:

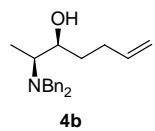
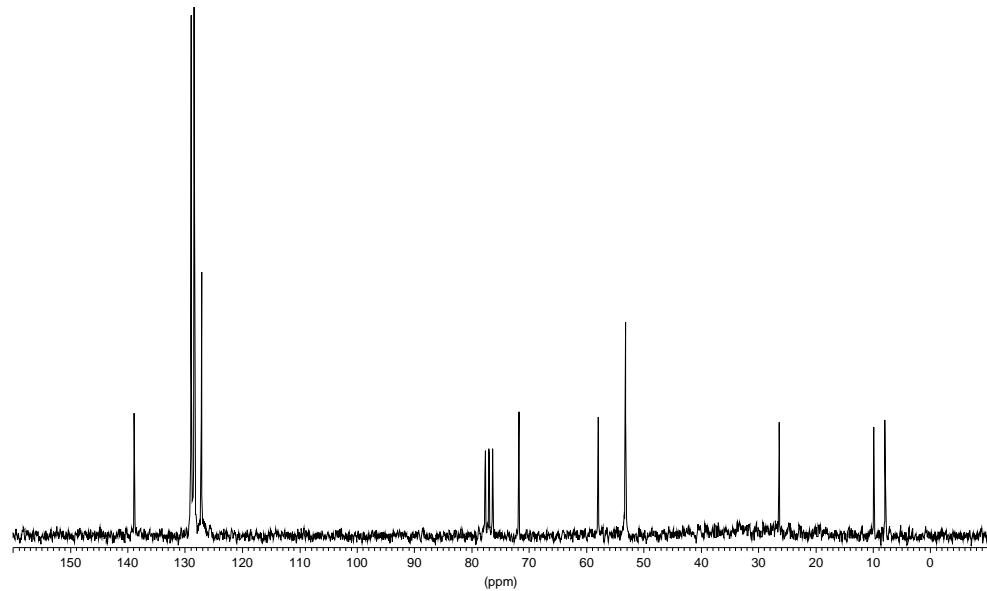
(2S,3S)-2-(Dibenzylamino)pentan-3-ol (4a).....	4S
(2S,3S)-2-(Dibenzylamino)hept-6-en-3-ol (4b).....	4S
(2S,3S)-3-(Dibenzylamino)-1-phenylbutan-2-ol (4c).....	5S
(3S,4S)-4-(Dibenzylamino)-6-methylheptan-3-ol (4d).....	5S
(5S,6S)-6-(Dibenzylamino)-8-mehtylnon-1-en-5-ol (4e).....	6S
(2S,3S)-3-(Dibenzylamino)-5-mehtyl-1-phenylhexan-2-ol (4f).....	6S
(2S,3S)-2-(Dibenzylamino)-1-phenylpentan-3-ol (4g).....	7S
(2S,3S)-2-(Dibenzylamino)-1-phenylhept-6-en-3-ol (4h).....	7S
(2S,3S)-3-(Dibenzylamino)-1,4-diphenylbutan-2-ol (4i).....	8S
(2S,3R)-2-(Dibenzylamino)pentan-3-ol (5a).....	8S
(2S,3R)-2-(Dibenzylamino)hept-6-en-3-ol (5b).....	9S
(2R,3S)-3-(Dibenzylamino)-1-phenylbutan-2-ol (5c).....	9S
(3R,4S)-4-(Dibenzylamino)-6-methylheptan-3-ol (5d).....	10S
(5R,6S)-6-(Dibenzylamino)-8-mehtylnon-1-en-5-ol (5e).....	10S

(<i>2R,3S</i>)-3-(Dibenzylamino)-5-methyl-1-phenylhexan-2-ol (5f).....	11S
(<i>2S,3R</i>)-2-(Dibenzylamino)-1-phenylpentan-3-ol (5g).....	11S
(<i>2S,3R</i>)-2-(Dibenzylamino)-1-phenylhept-6-en-3-ol (5h).....	12S
(<i>2S,3R</i>)-3-(Dibenzylamino)-1,4-diphenylbutan-2-ol (5i).....	12S
(<i>2S,3S</i>)-3-(Dibenzylamino)butan-2-ol (6a).....	13S
(<i>2S,3S</i>)-3-(Dibenzylamino)-5-methylhexan-2-ol (6b).....	13S
(<i>2S,3S</i>)-3-(Dibenzylamino)-4-phenylbutan-2-ol (6c).....	14S
(<i>2R,3S</i>)-3-(Dibenzylamino)butan-2-ol (7a).....	14S
(<i>2R,3S</i>)-3-(Dibenzylamino)-5-methylhexan-2-ol (7b).....	15S
(<i>2R,3S</i>)-3-(Dibenzylamino)-4-phenylbutan-2-ol (7c).....	15S
(<i>2S,3S</i>)-1-Deuterium-3-(dibenzylamino)butan-2-ol (8a).....	16S
(<i>2S,3S</i>)-1-Deuterium-3-(dibenzylamino)-4-phenylbutan-2-ol (8c).....	16S
(<i>2R,3S</i>)-1-Deuterium-3-(dibenzylamino)butan-2-ol (9a).....	17S
(<i>2R,3S</i>)-1-Deuterium-3-(dibenzylamino)-4-phenylbutan-2-ol (9c).....	
	17S

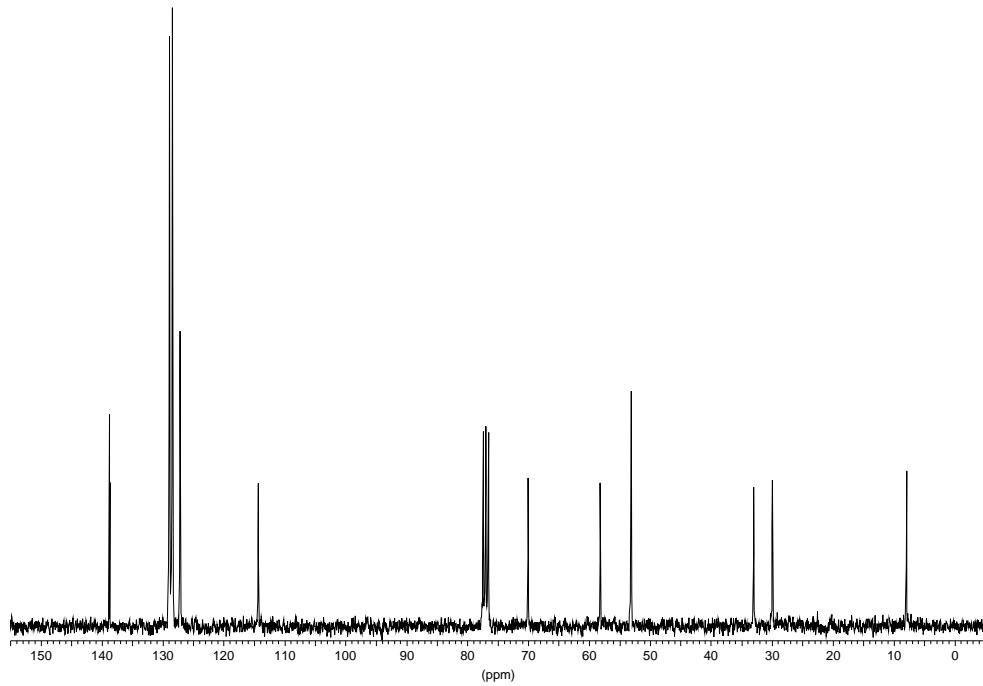
General: All reactions were carried out under an atmosphere of dry N₂ using oven-dried glassware and syringes. All reagents were purchased in the higher quality available and were used without further purification. The solvents used in column chromatography, were obtained from commercial suppliers and used without further distillation. TLC was performed on aluminium-backed plates coated with silica gel 60 with F₂₅₄ indicator (Scharlau). Flash column chromatography was carried out on silica gel 60, 230-240 mesh. ¹H NMR (200, 300, 400 MHz) and ¹³C NMR (50, 75, 100 MHz) spectra were measured at room temperature, with tetramethylsilane (δ = 0.0, ¹H NMR) or CDCl₃ (δ = 77.00, ¹³C NMR) as internal standard. Carbon multiplicities were assigned by DEPT techniques. Low-resolution electron impact mass spectra (EI-LRMS) were obtained at 70 eV, and the intensities are reported as a percentage relative to the base peak after the corresponding *m/z* value.

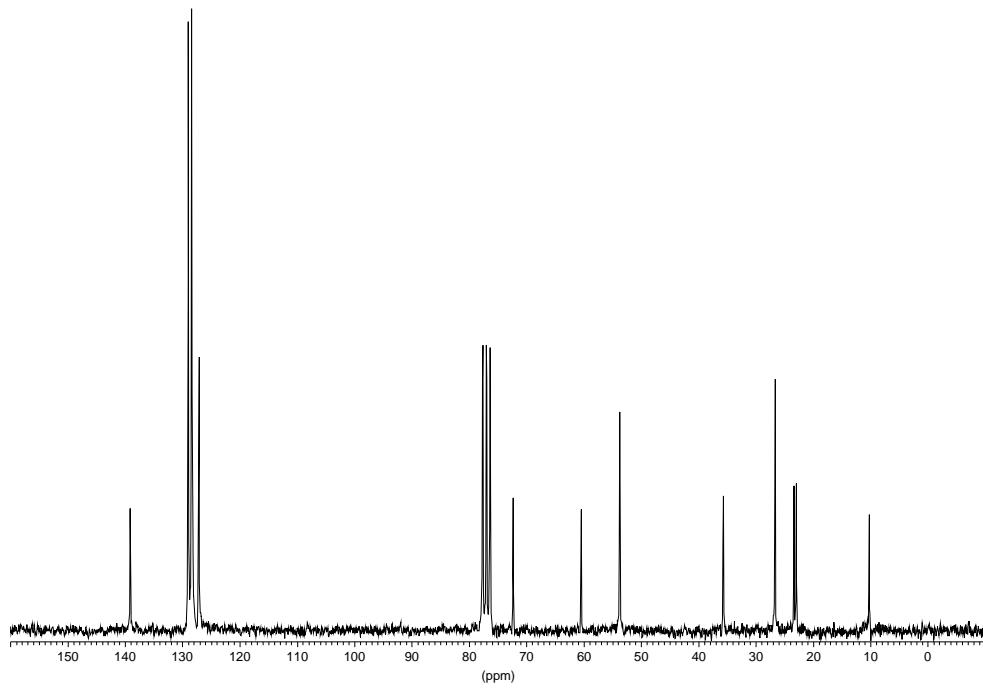
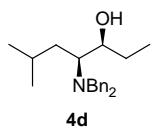
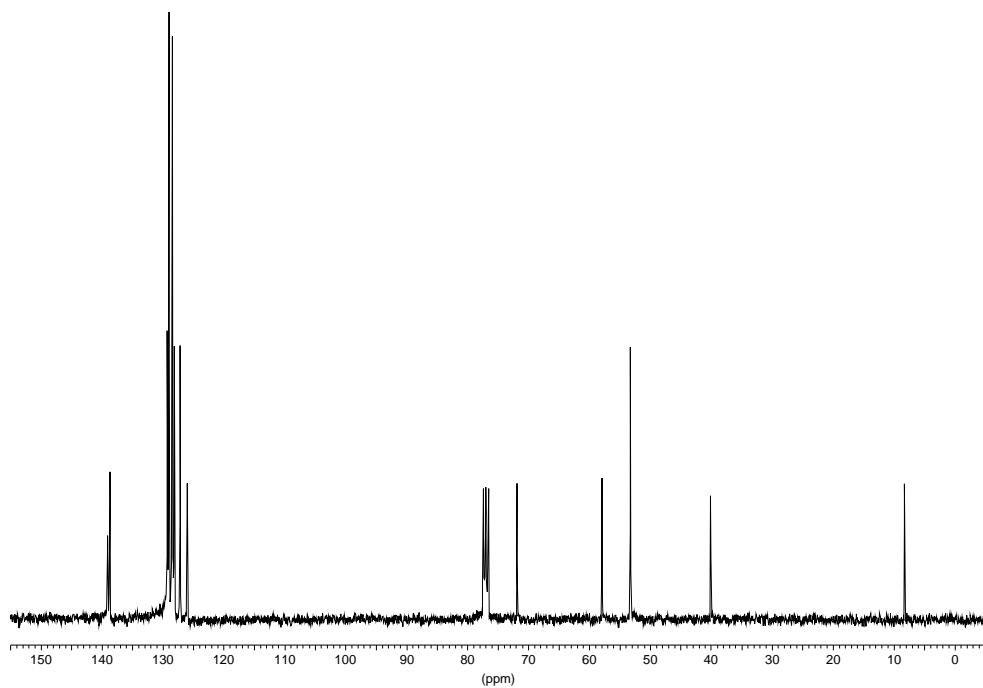
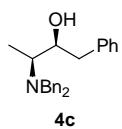


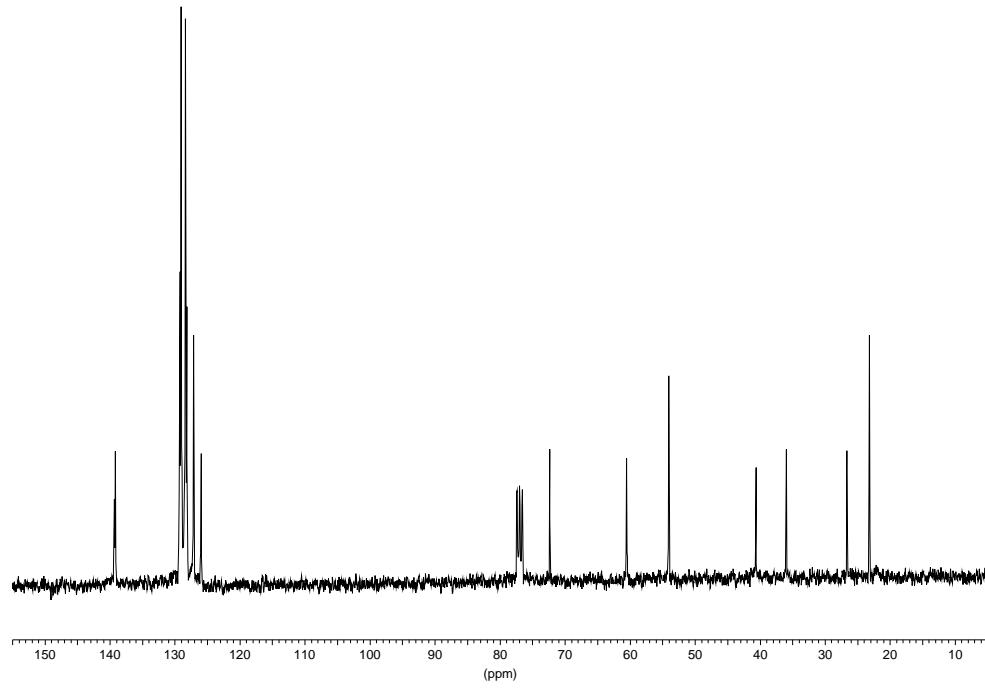
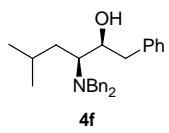
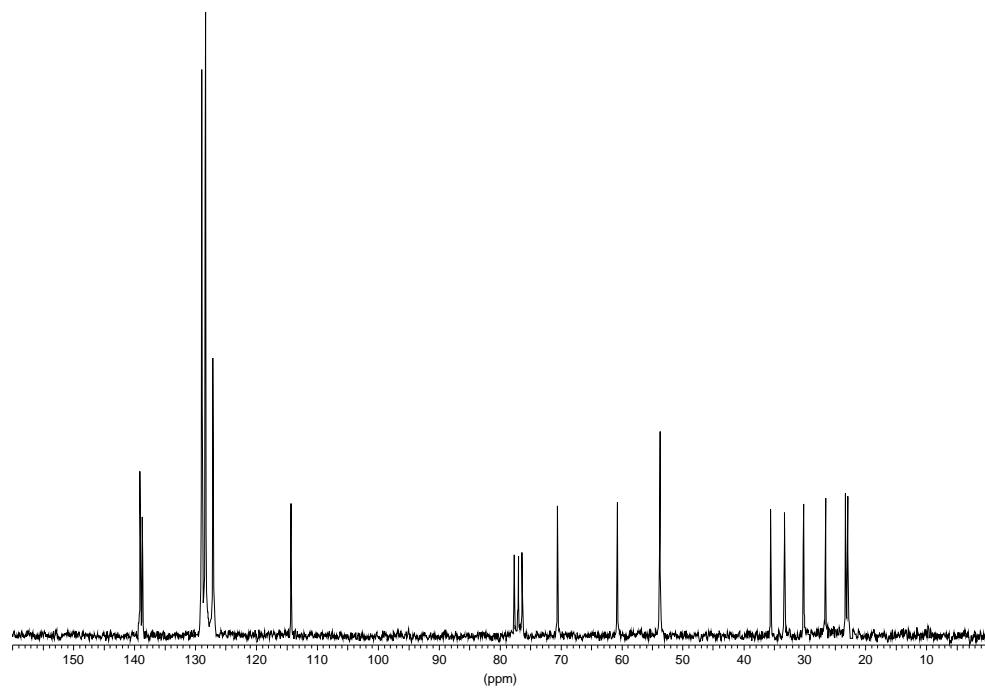
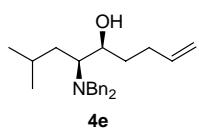
4a

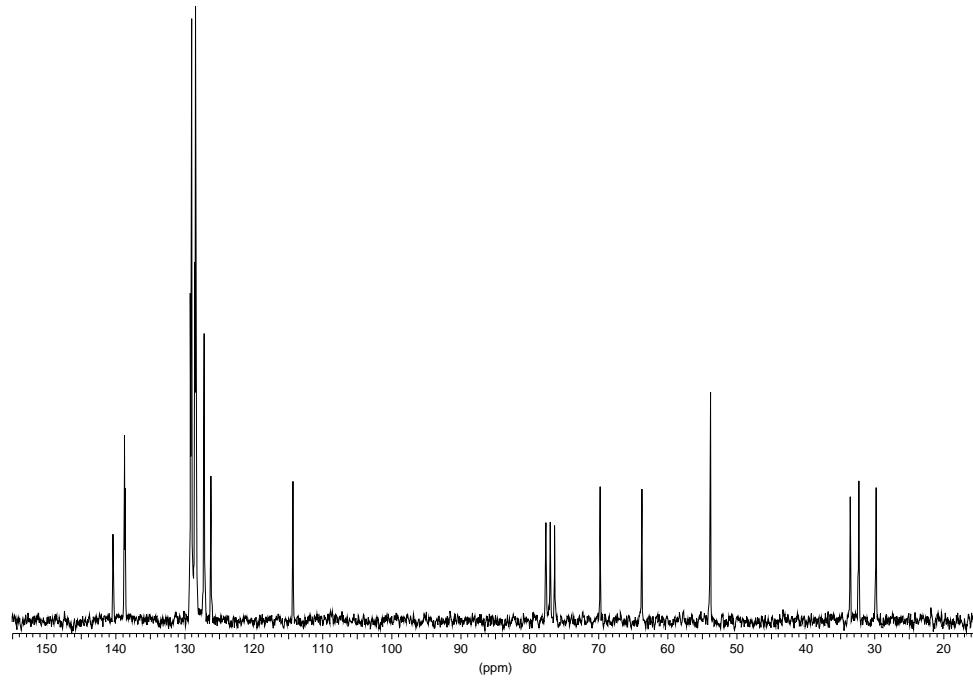
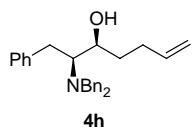
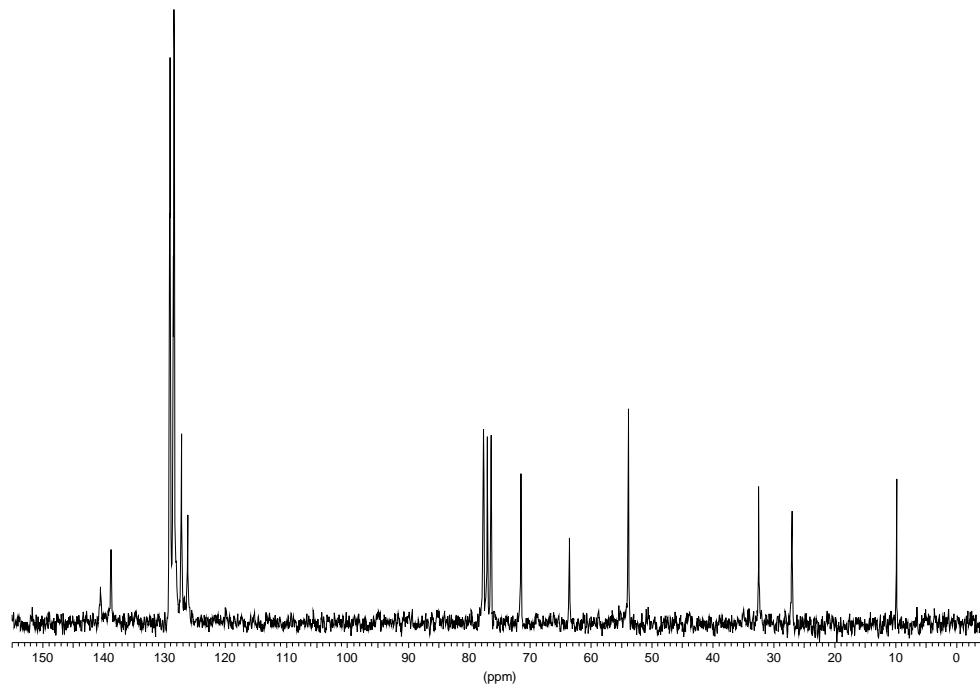
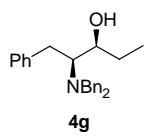


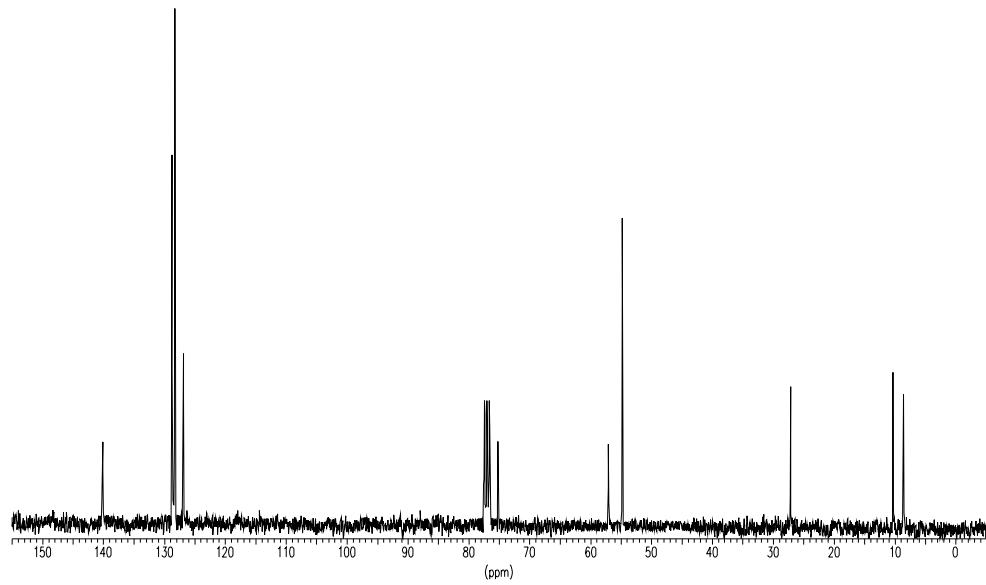
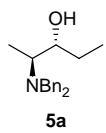
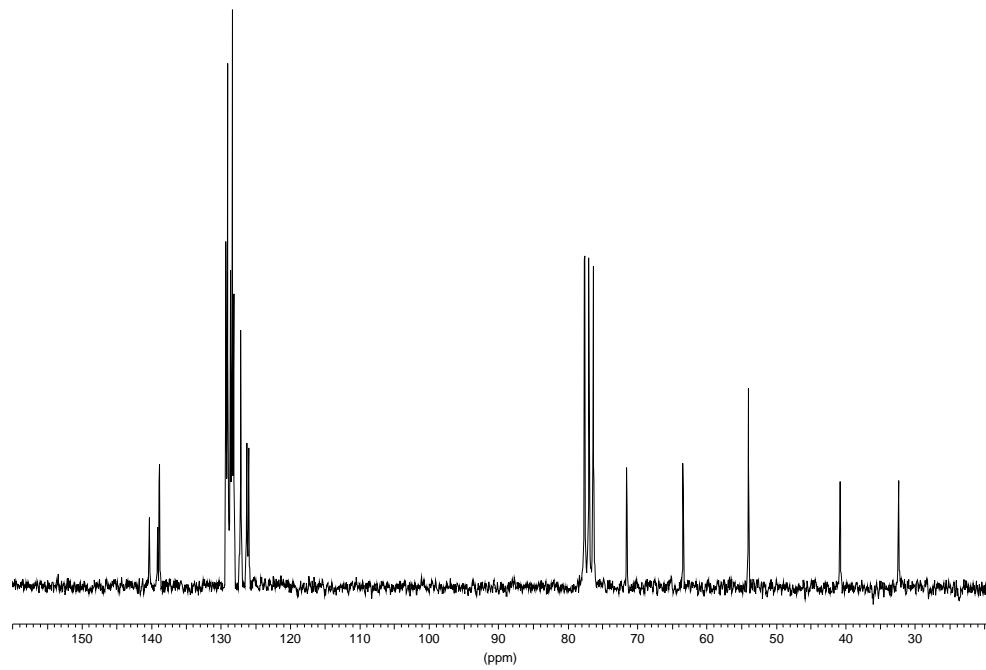
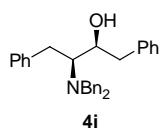
4b

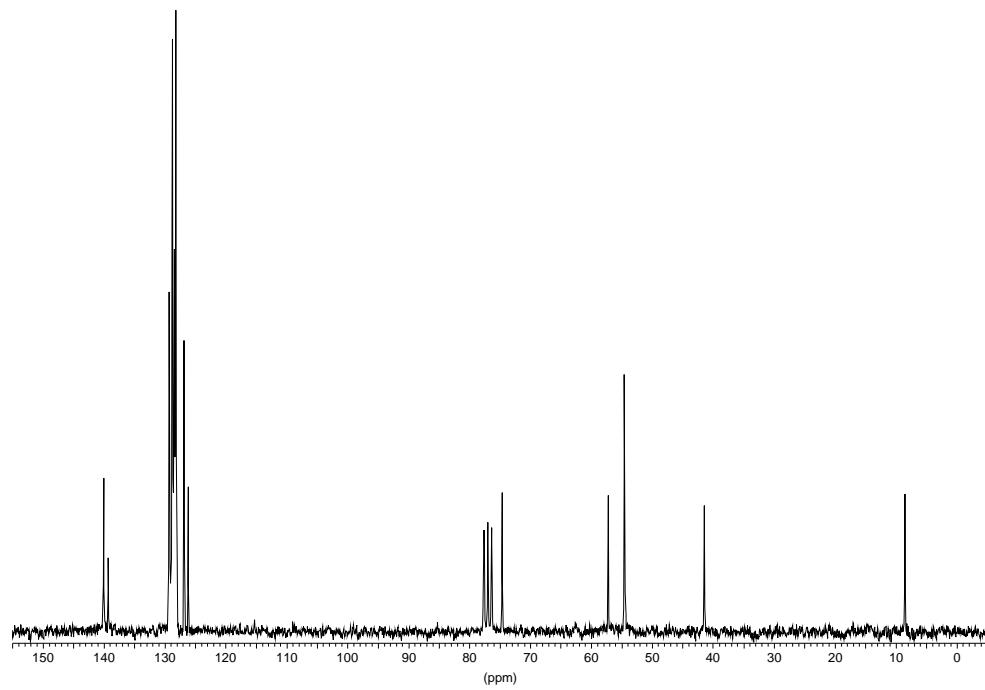
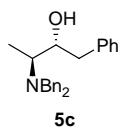
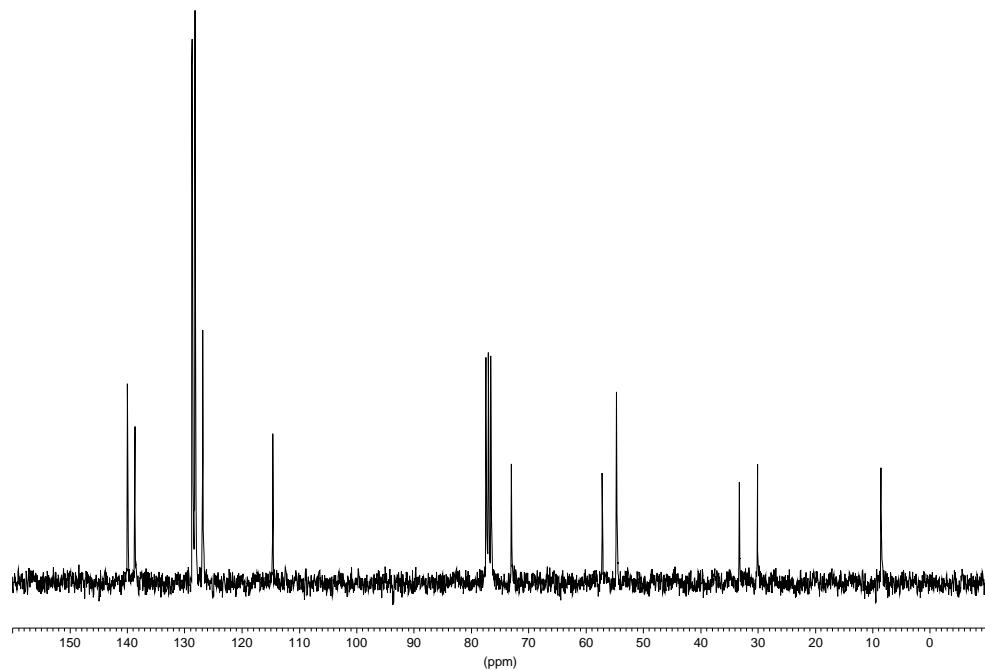
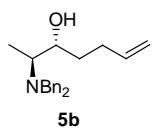


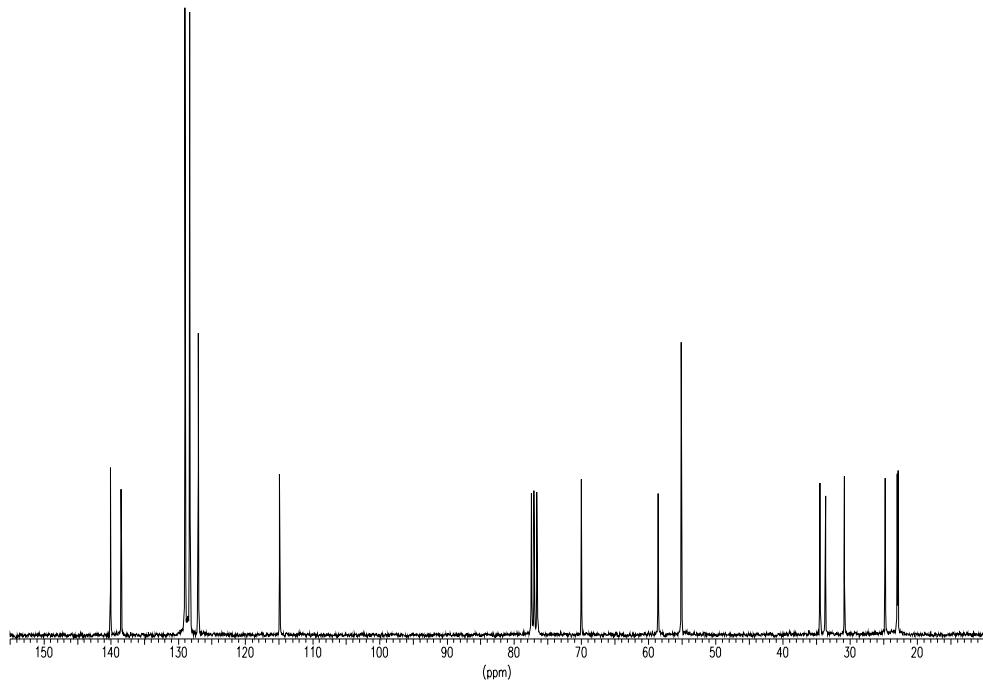
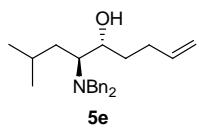
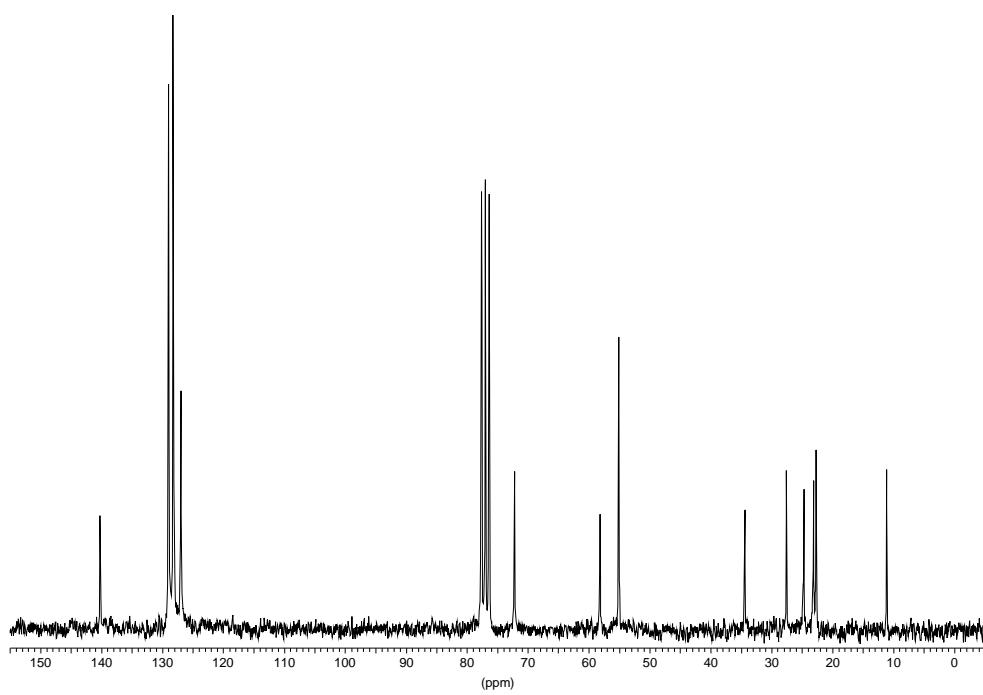
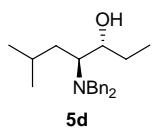


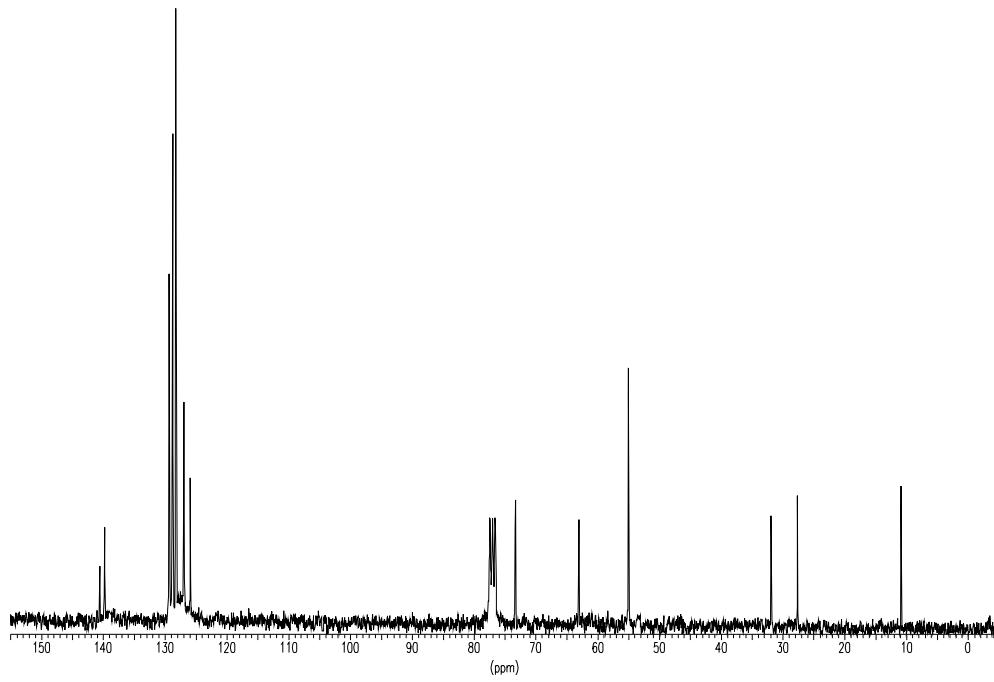
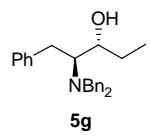
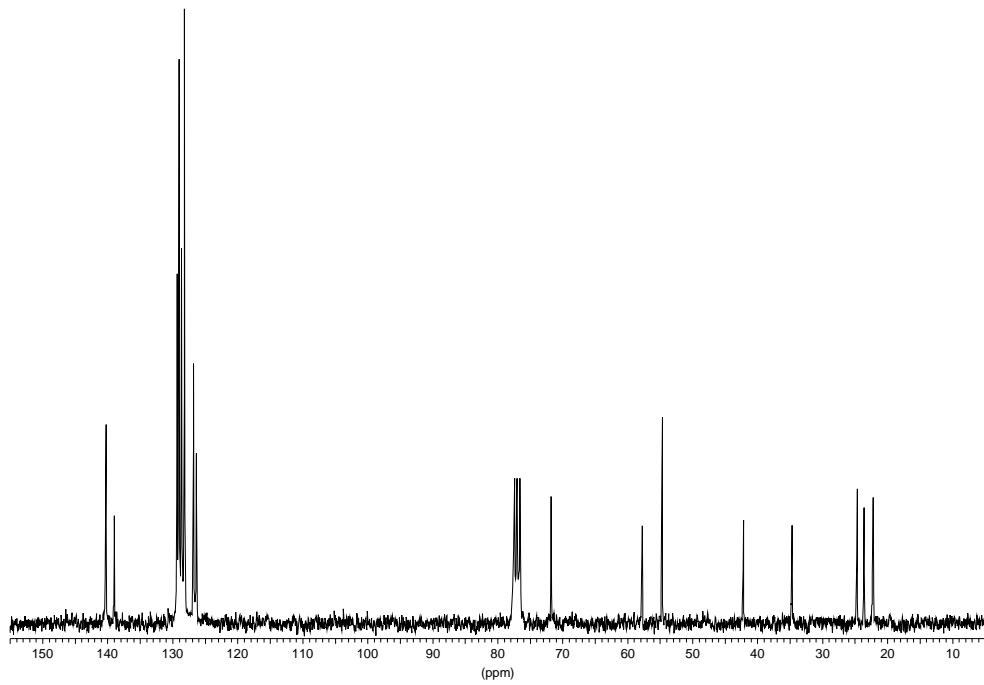
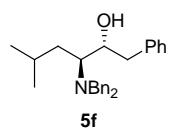


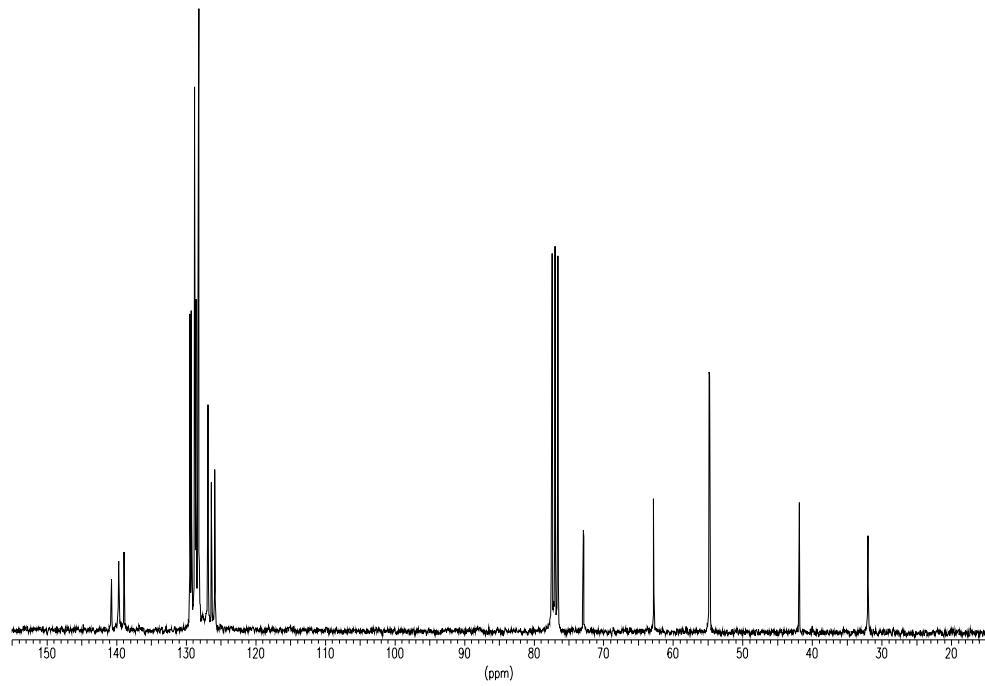
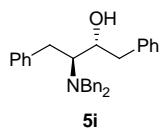
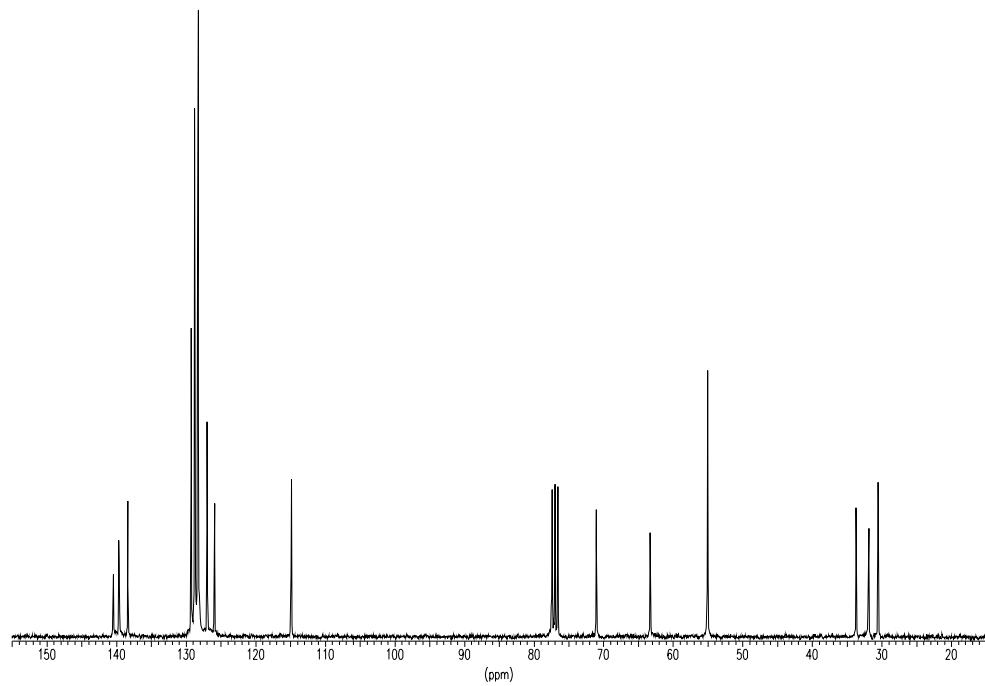
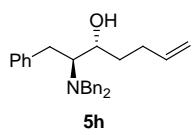


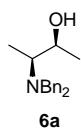




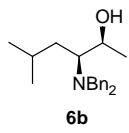
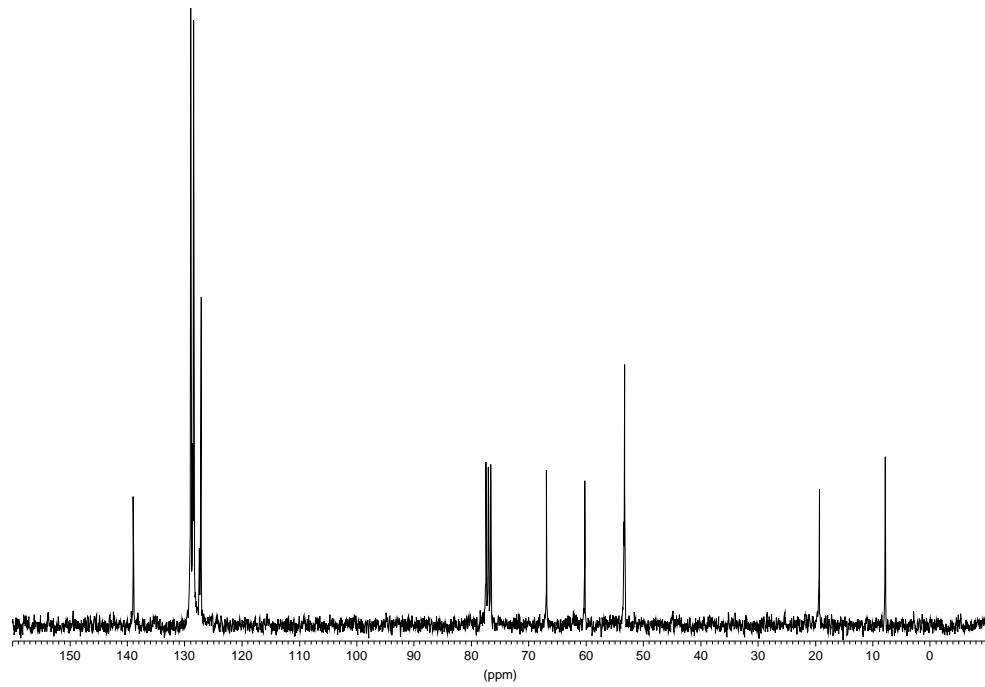








6a



6b

