

SUPPORTING INFORMATION

Photochemistry of Dicarbonyl-Substituted Benzenes: Influence of Steric and Electronic Factors in the Cyclization and Diels-Alder Trapping Reactions of Photoenols

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Dedicated to Prof. Waldemar Adam on the occasion of his 70th birth anniversary

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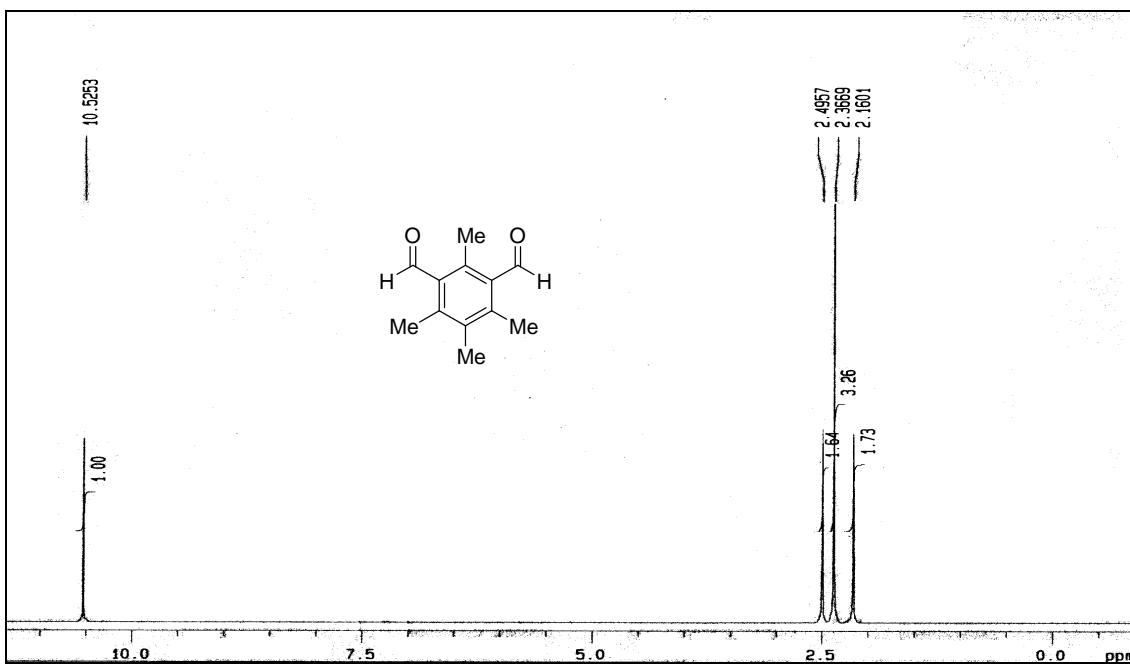


Figure S1. ¹H NMR spectrum of **2, 4, 5, 6**-Tetramethylisophthalaldehyde.

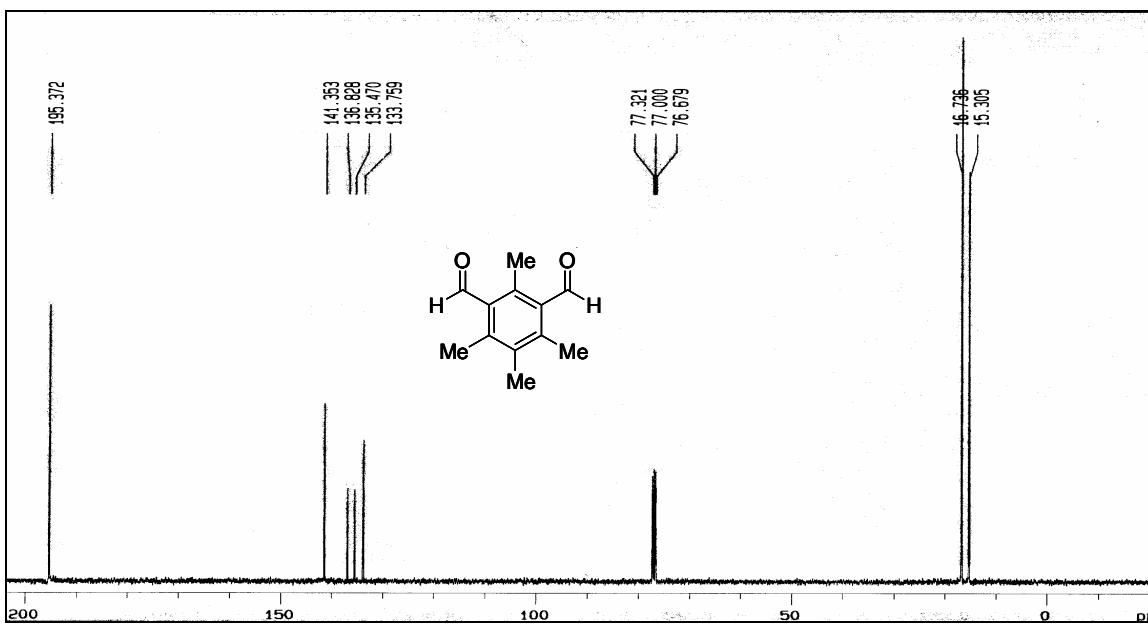


Figure S2. ¹³C NMR spectrum of **2, 4, 5, 6**-Tetramethylisophthalaldehyde.

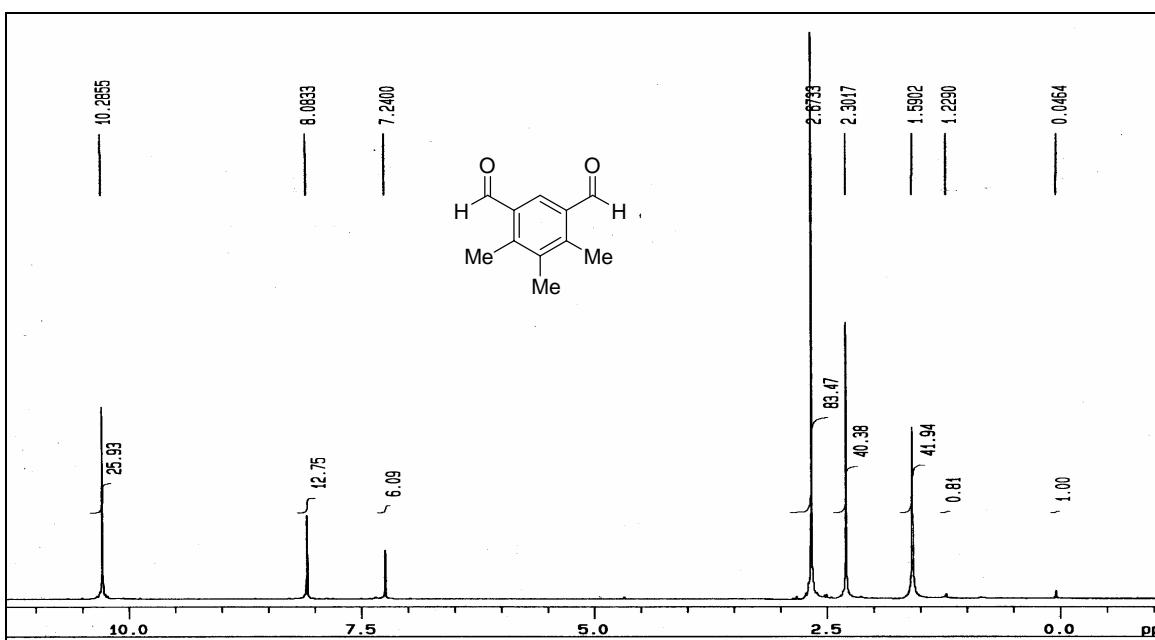


Figure S3. ^1H NMR spectrum of **4, 5, 6**-Trimethylisophthalaldehyde.

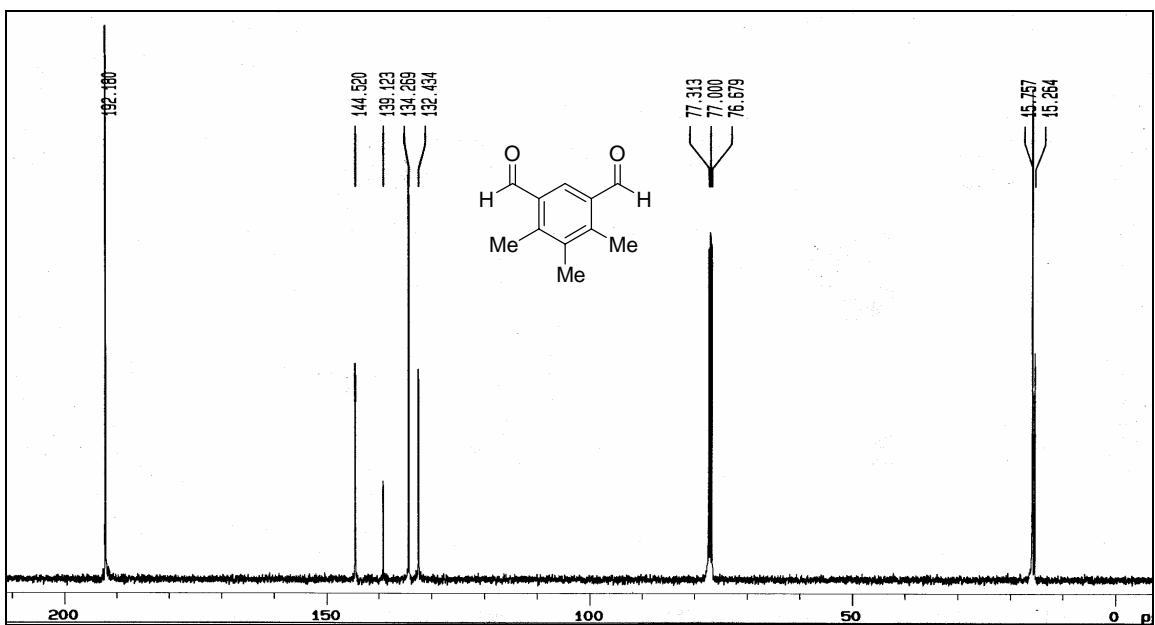


Figure S4. ^{13}C NMR spectrum of **4, 5, 6**-Trimethylisophthalaldehyde.

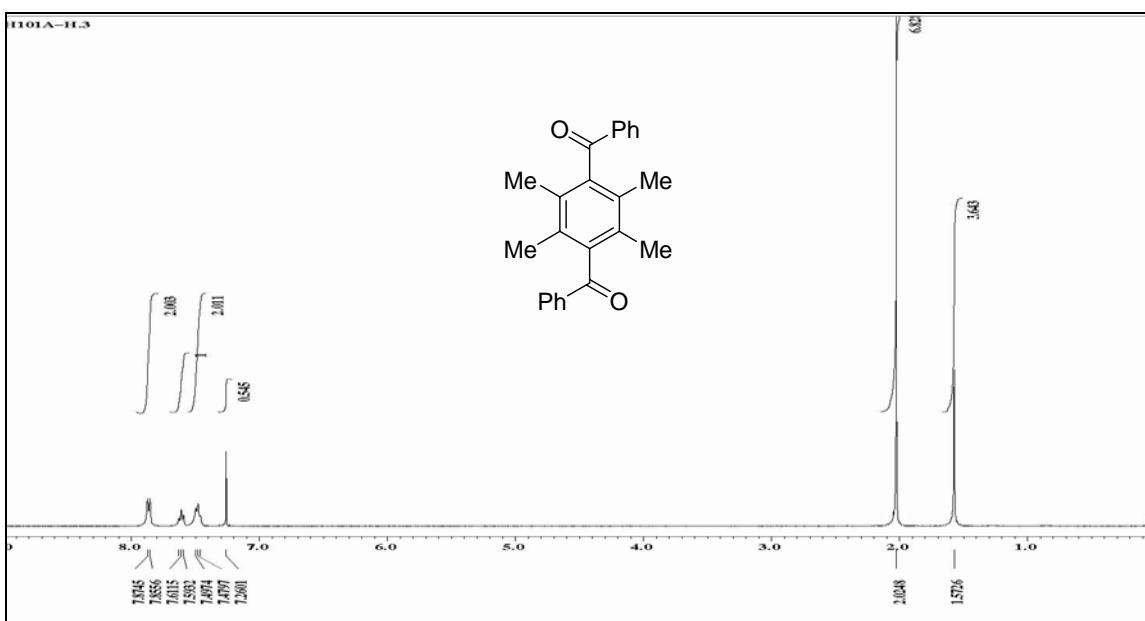


Figure S5. ¹H NMR spectrum of ketone **1a**.

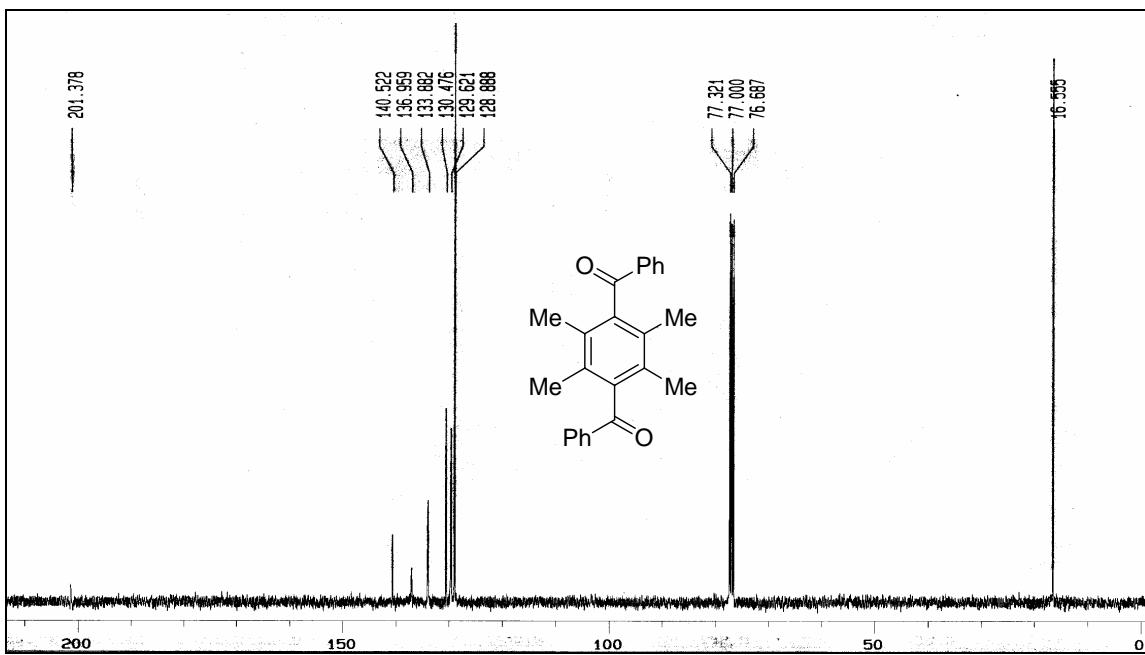


Figure S6. ¹³C NMR spectrum of ketone **1a**.

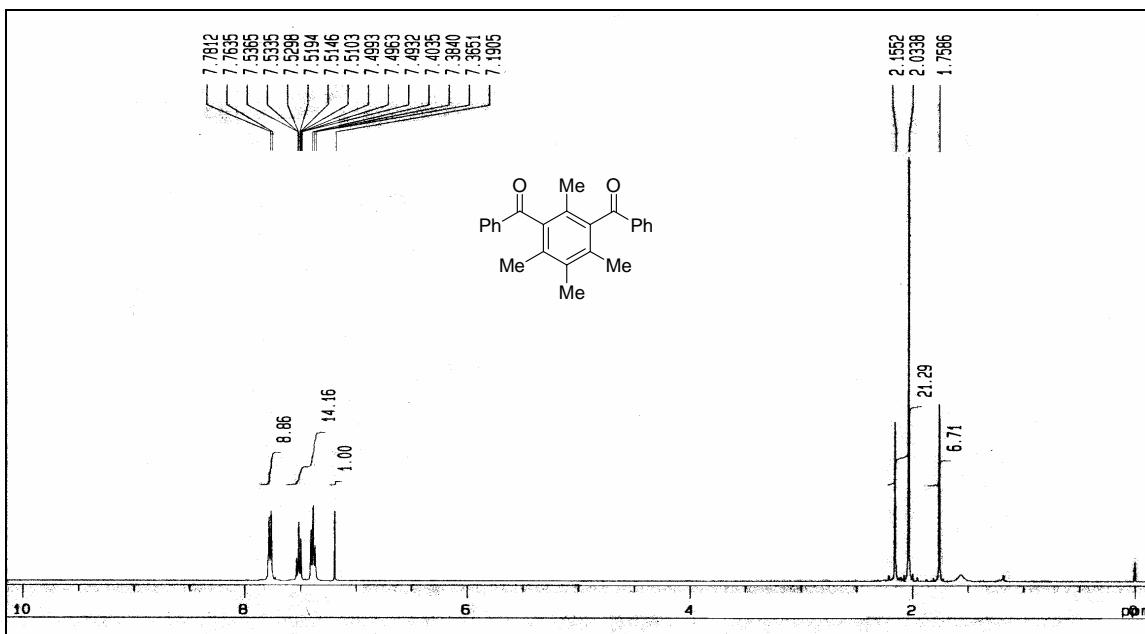


Figure S7. ^1H NMR spectrum of ketone **2a**.

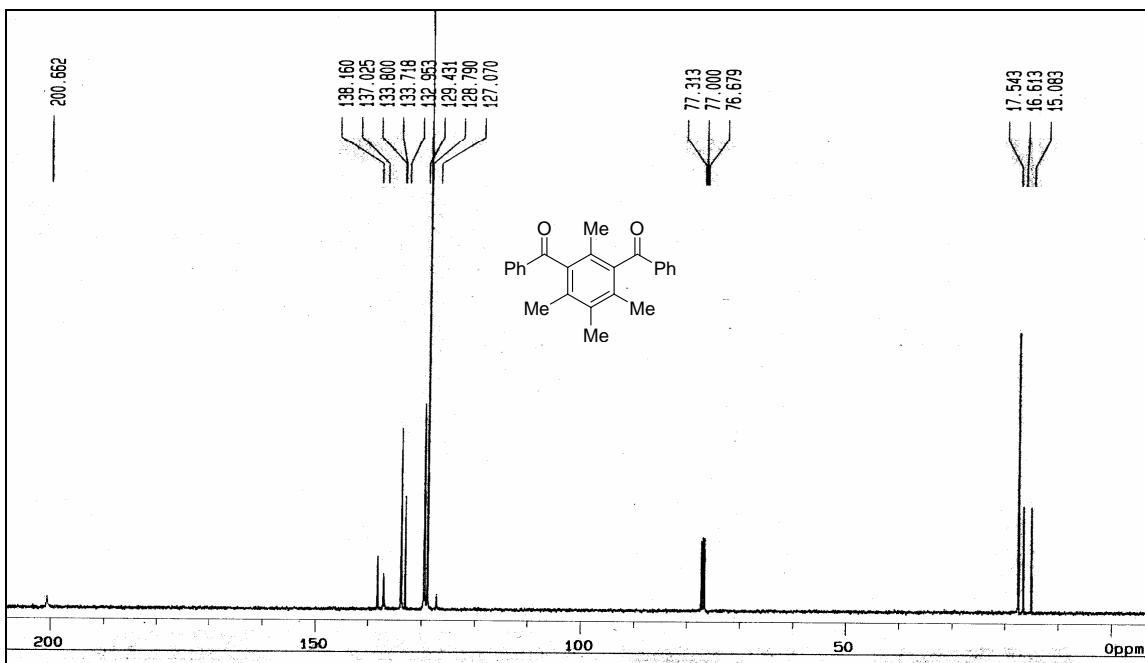


Figure S8. ^{13}C NMR spectrum of ketone **2a**.

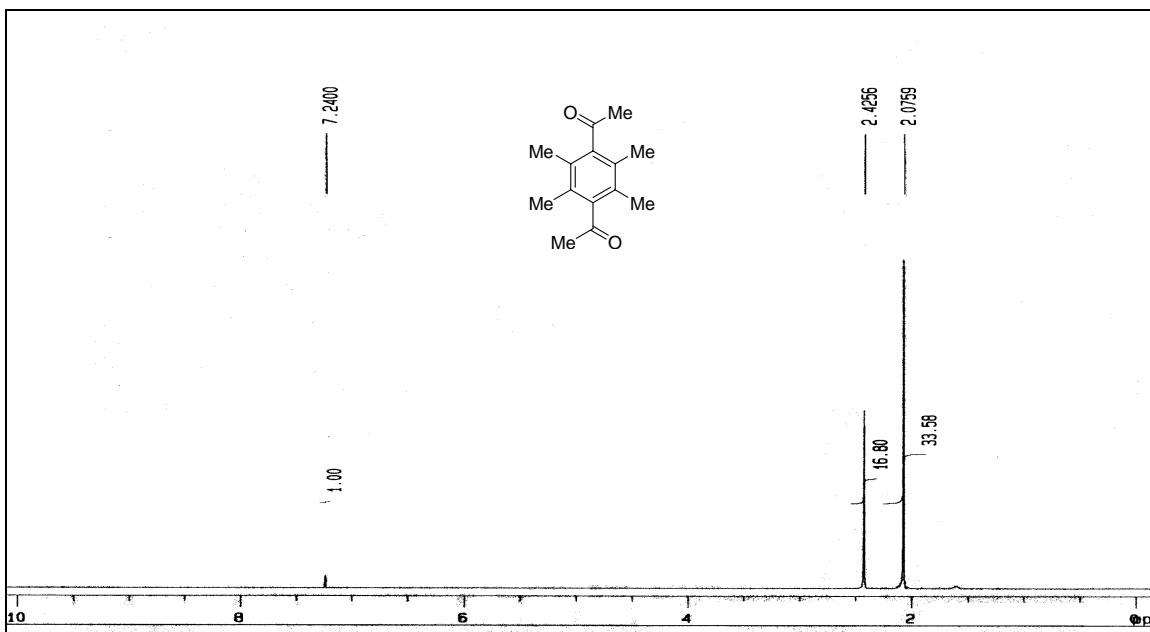


Figure S9. ¹H NMR spectrum of ketone **1b**.

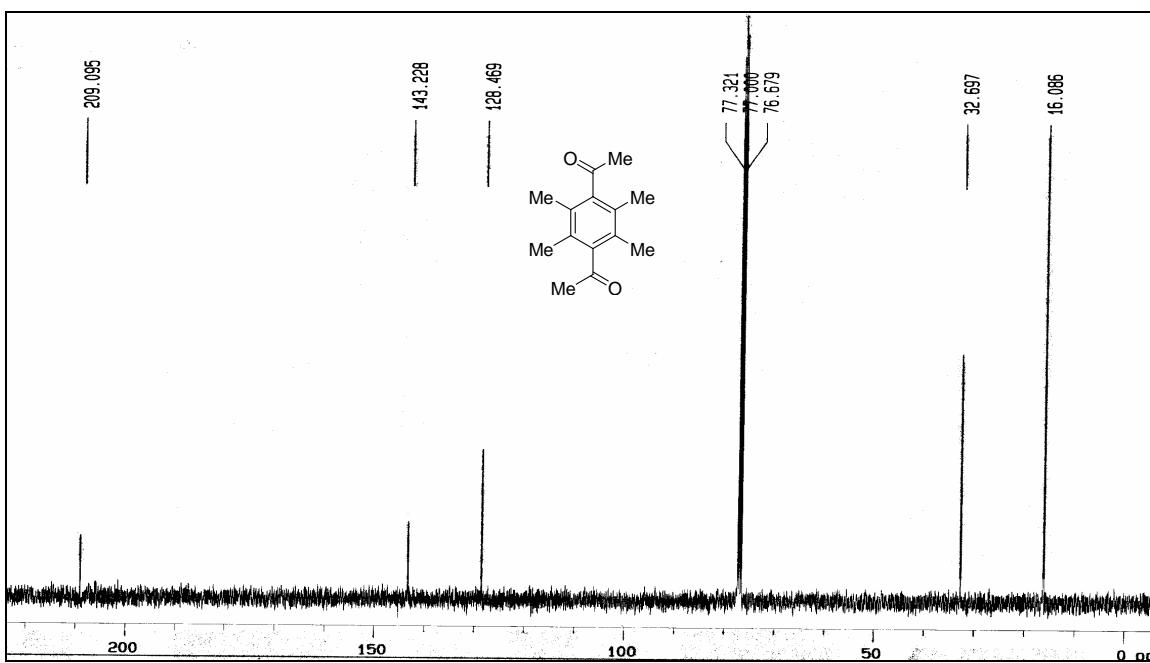


Figure S10. ¹³C NMR spectrum of ketone **1b**.

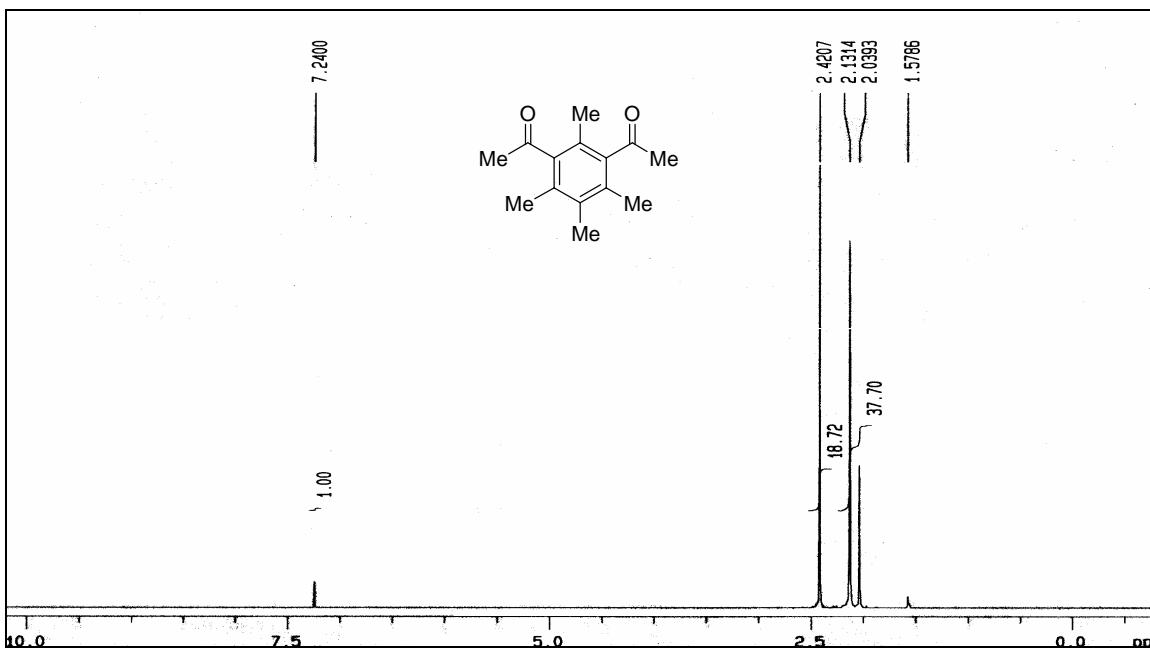


Figure S11. ¹H NMR spectrum of ketone **2b**.

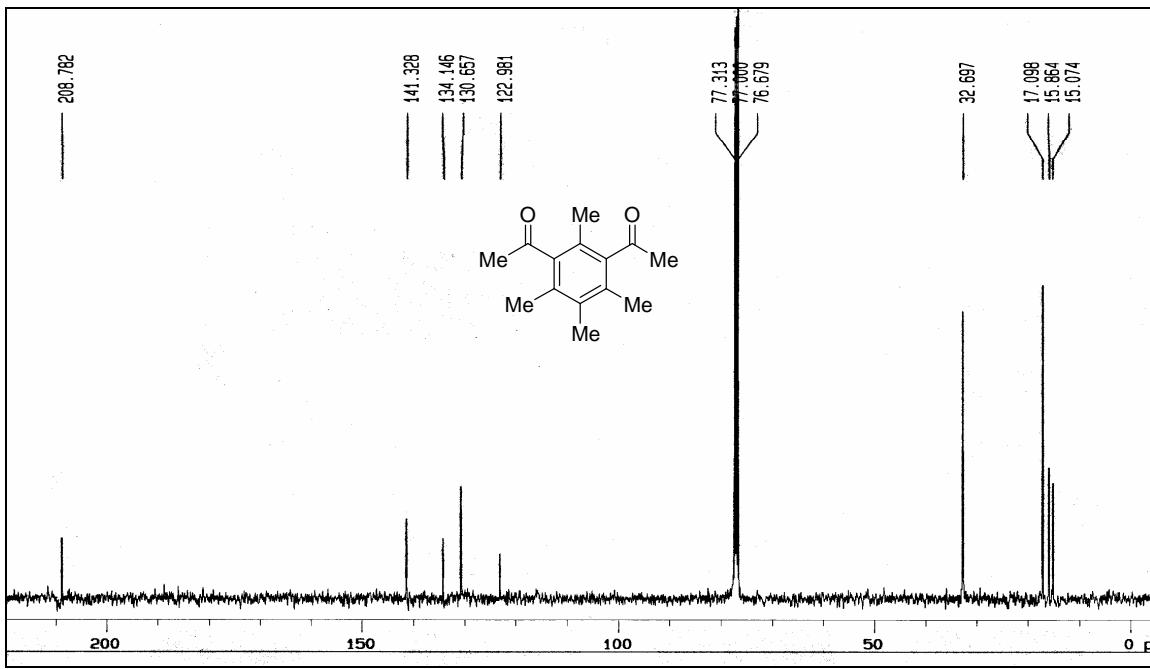


Figure S12. ¹³C NMR spectrum of ketone **2b**.

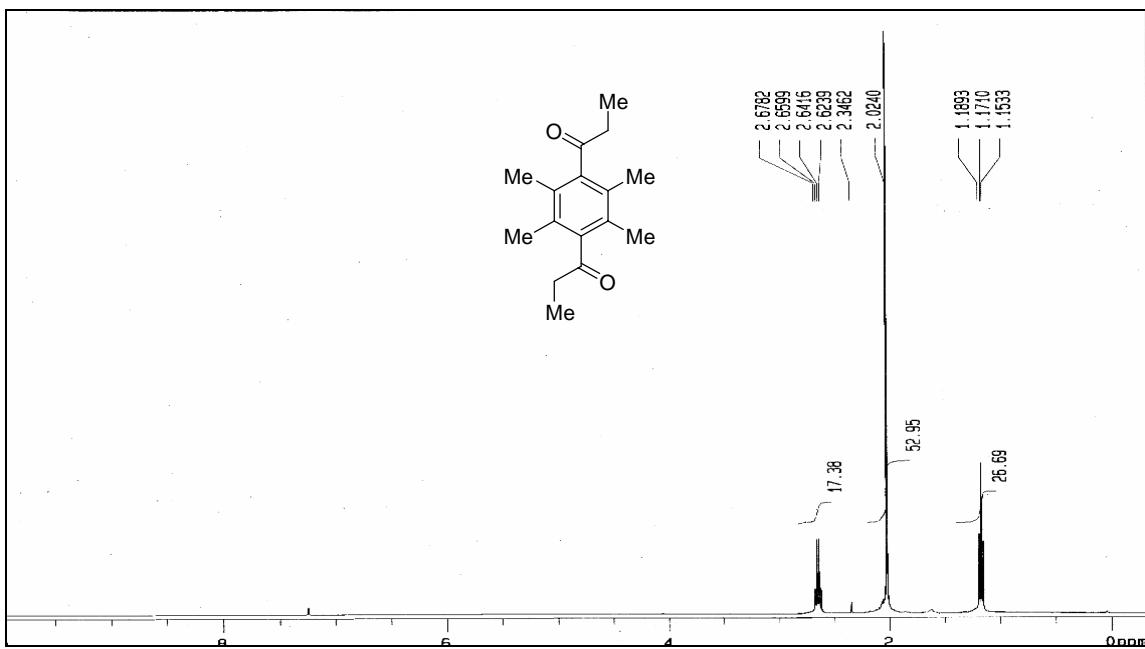


Figure S13. ¹H NMR spectrum of ketone **1c**.

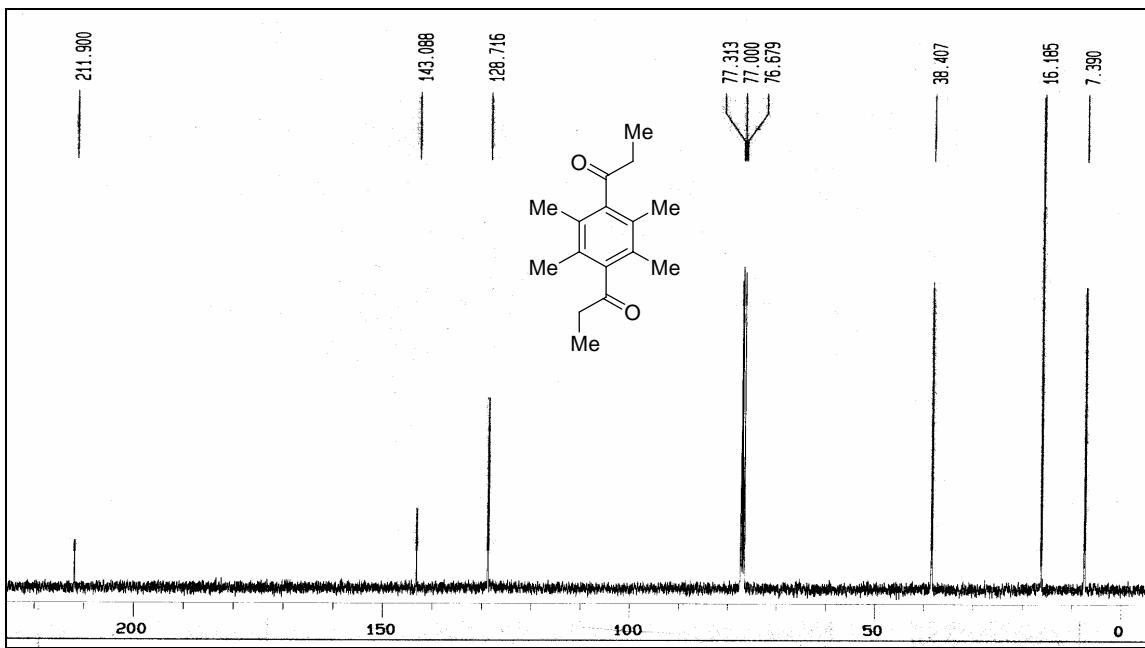


Figure S14. ¹³C NMR spectrum of ketone **1c**.

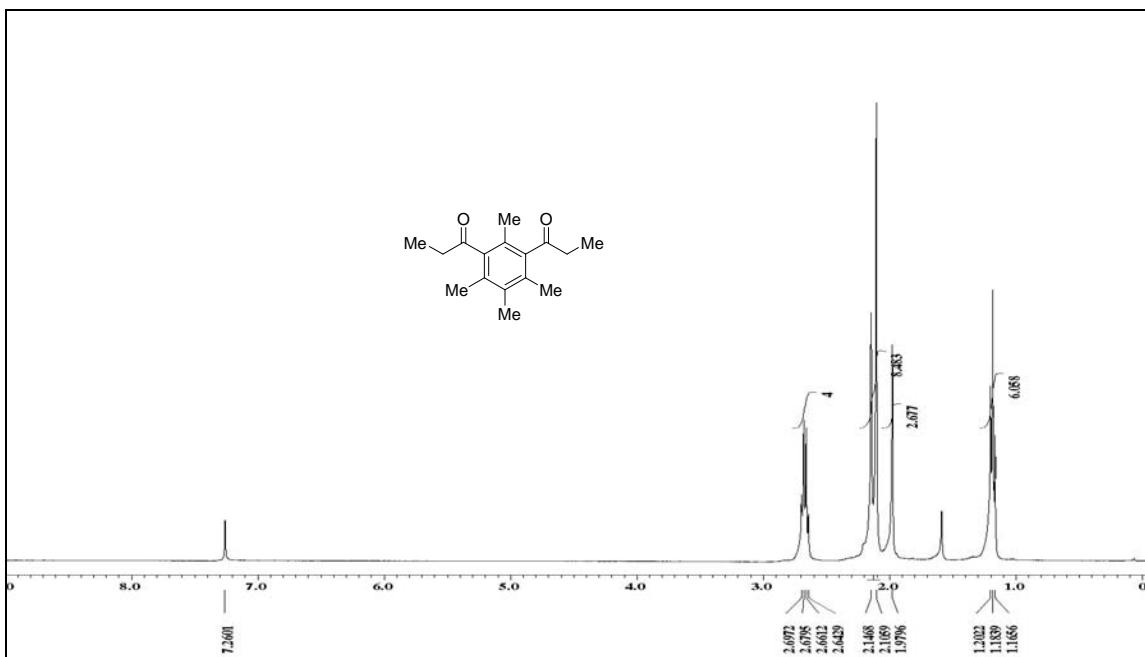


Figure S15. ^1H NMR spectrum of ketone **2c**.

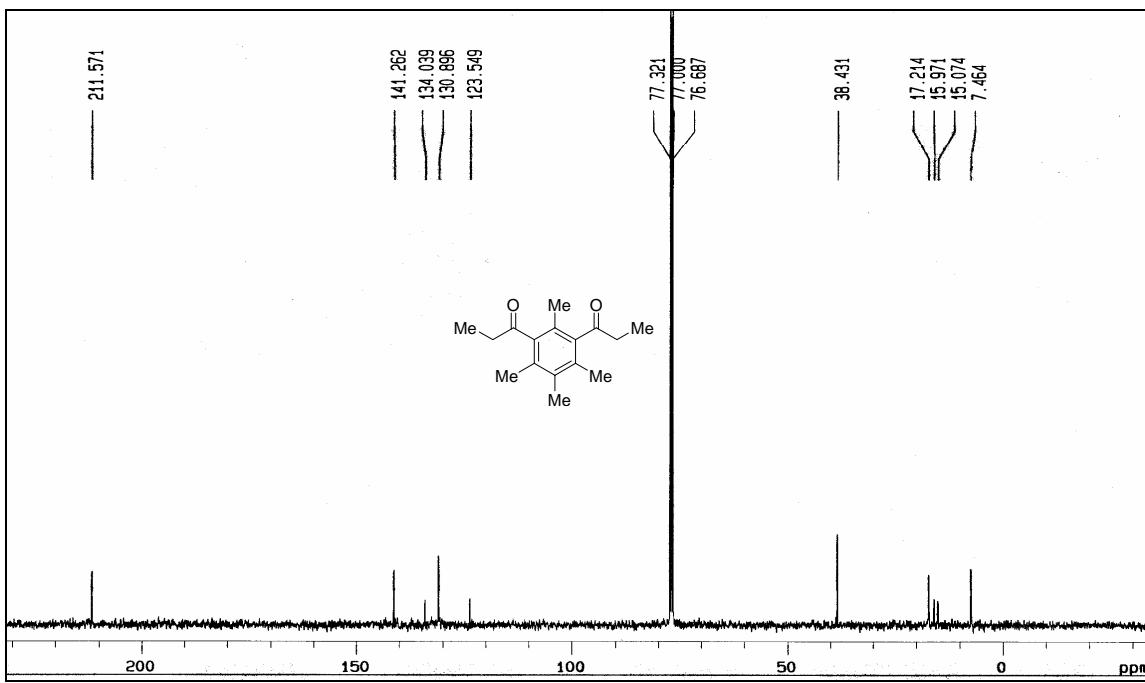


Figure S16. ^{13}C NMR spectrum of ketone **2c**.

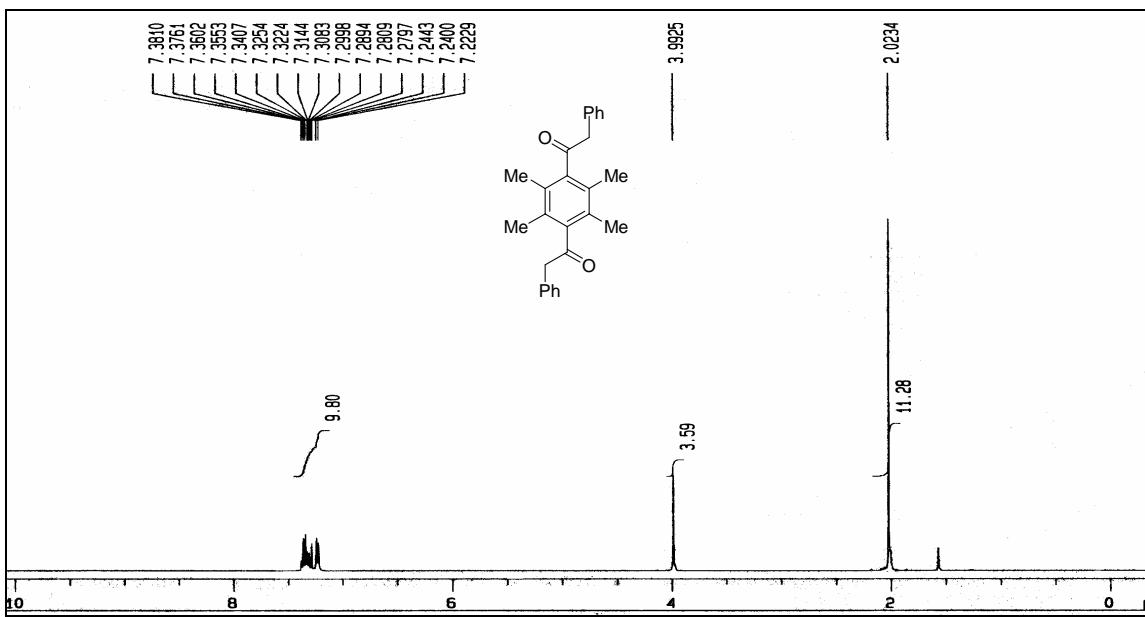


Figure S17. ¹H NMR spectrum of ketone **1d**.

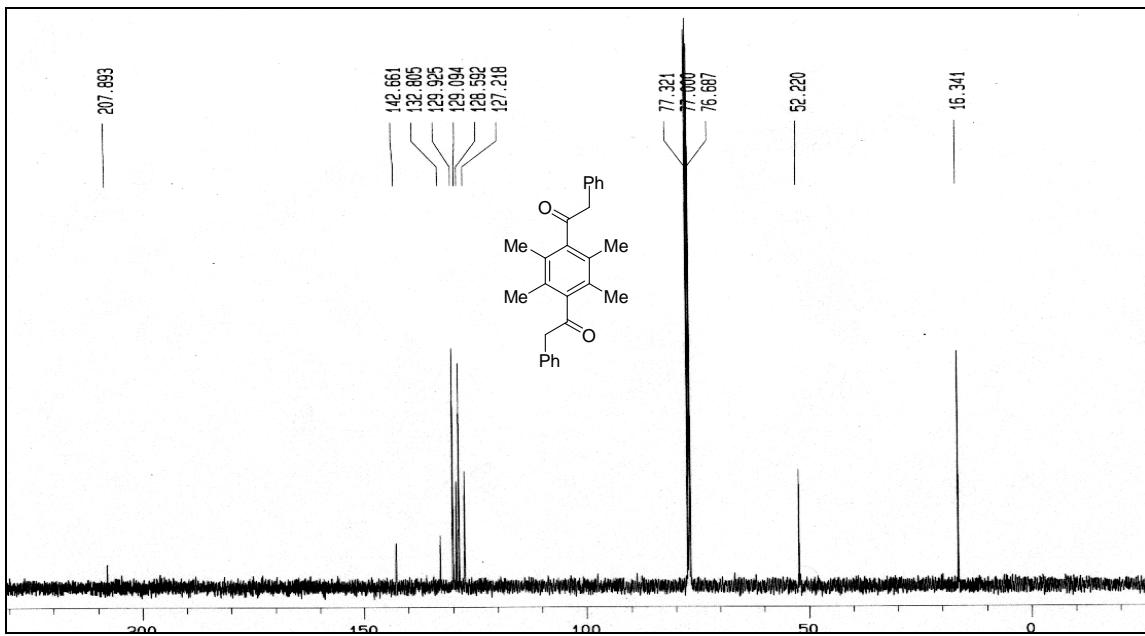


Figure S18. ¹³C NMR spectrum of ketone **1d**.

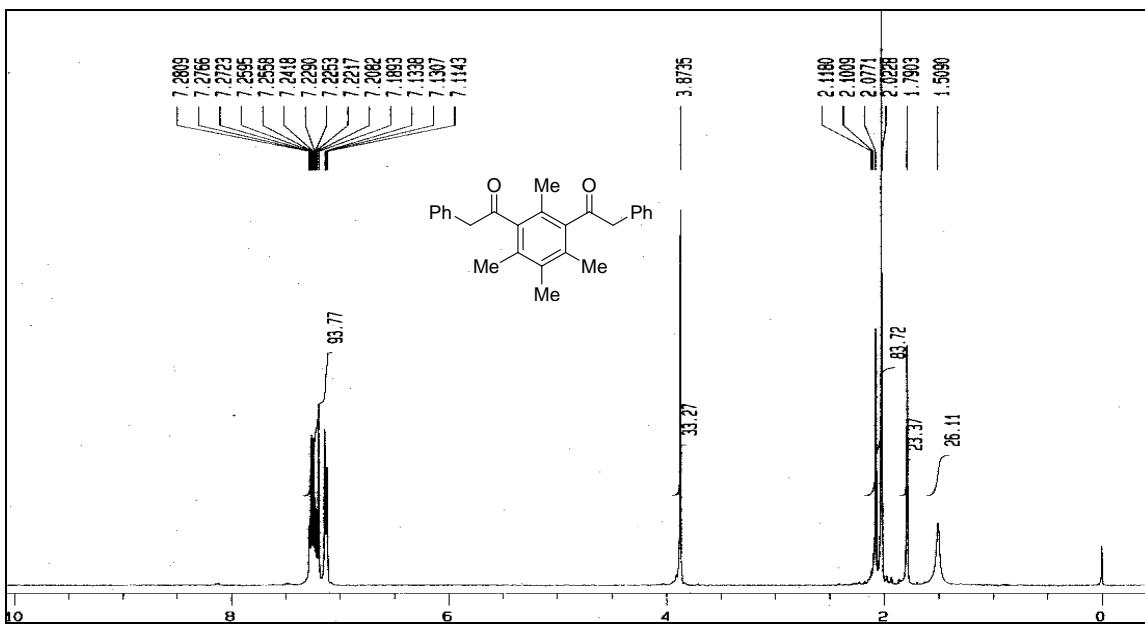


Figure S19. ^1H NMR spectrum of ketone **2d**.

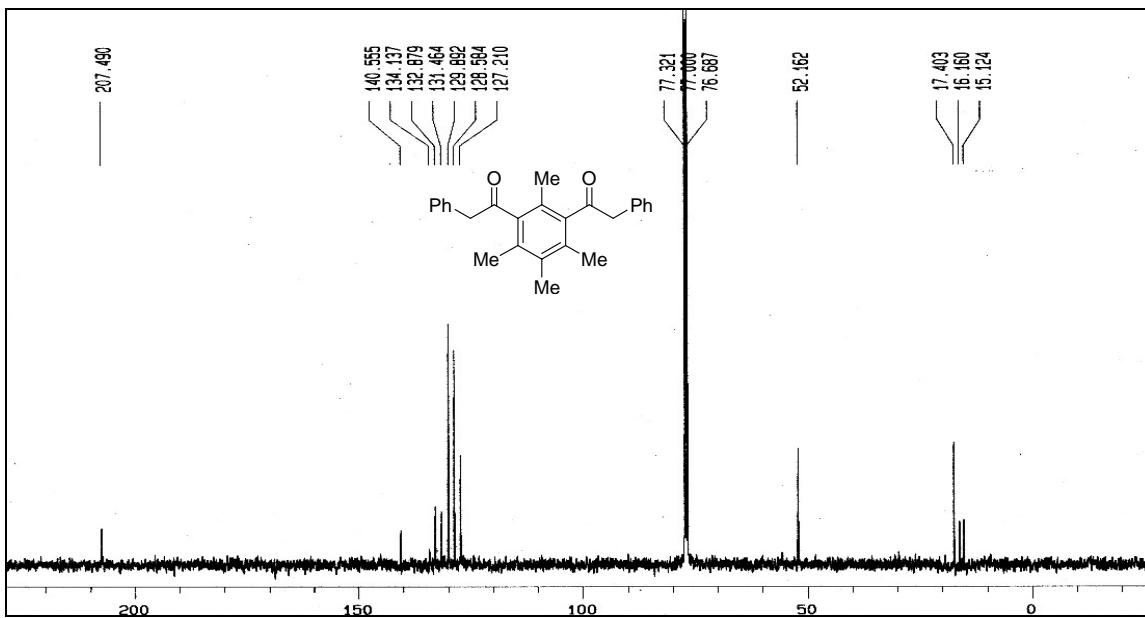


Figure S20. ^{13}C NMR spectrum of ketone **2d**.

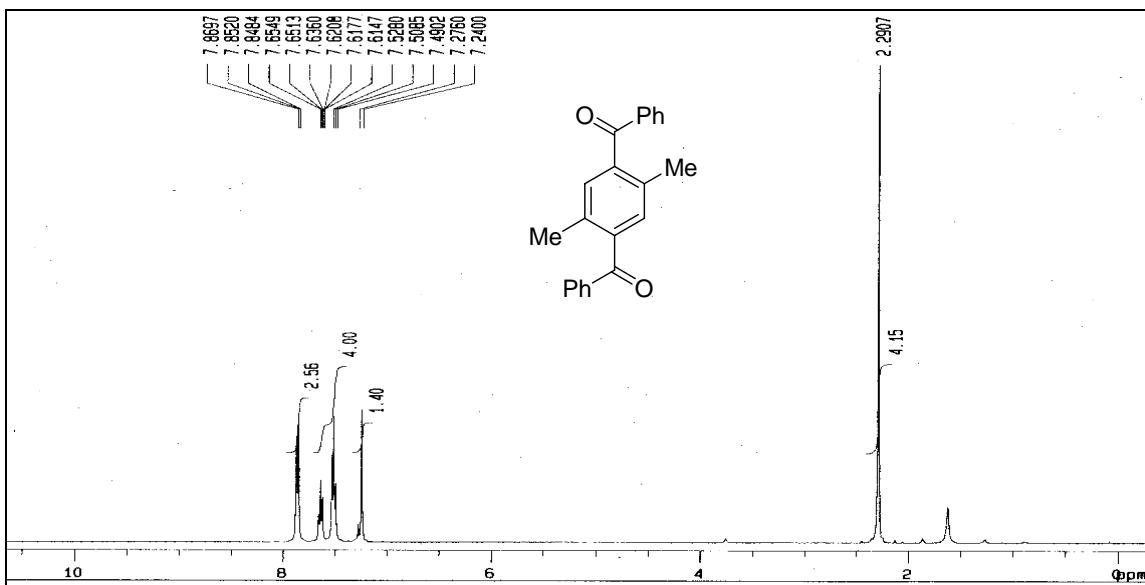


Figure S21. ¹H NMR spectrum of ketone 3.

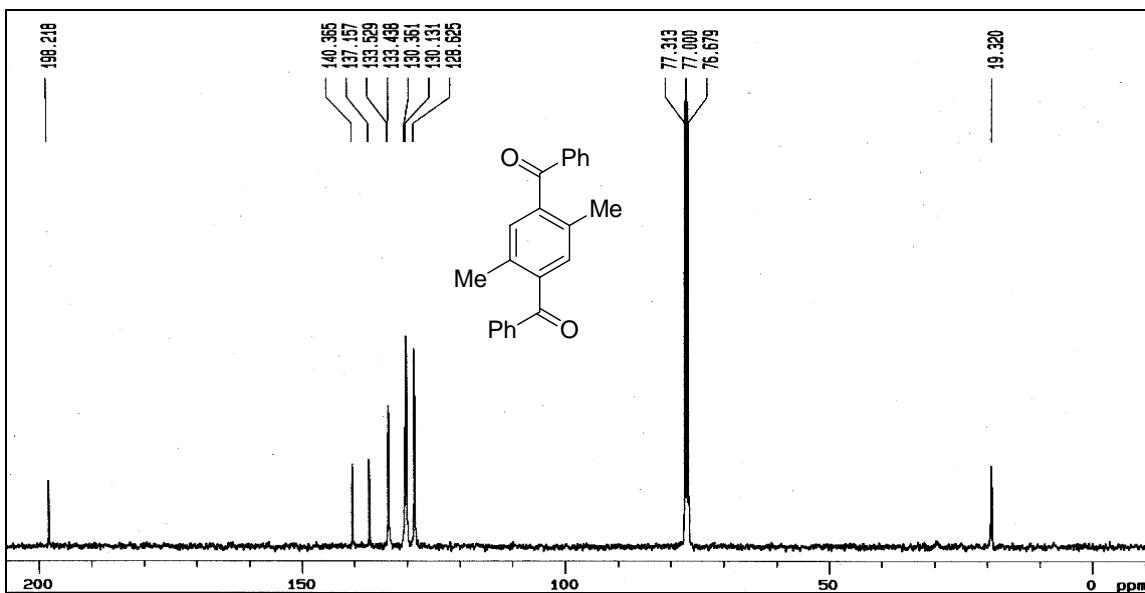


Figure 22. ¹³C NMR spectrum of ketone 3.

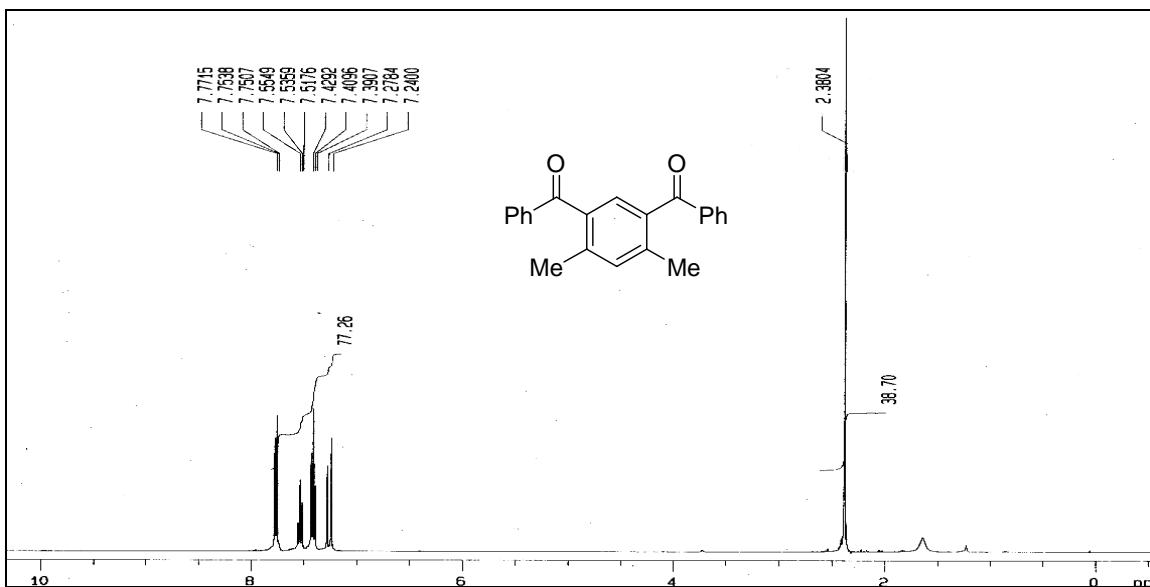


Figure S23. ^1H NMR spectrum of ketone 4.

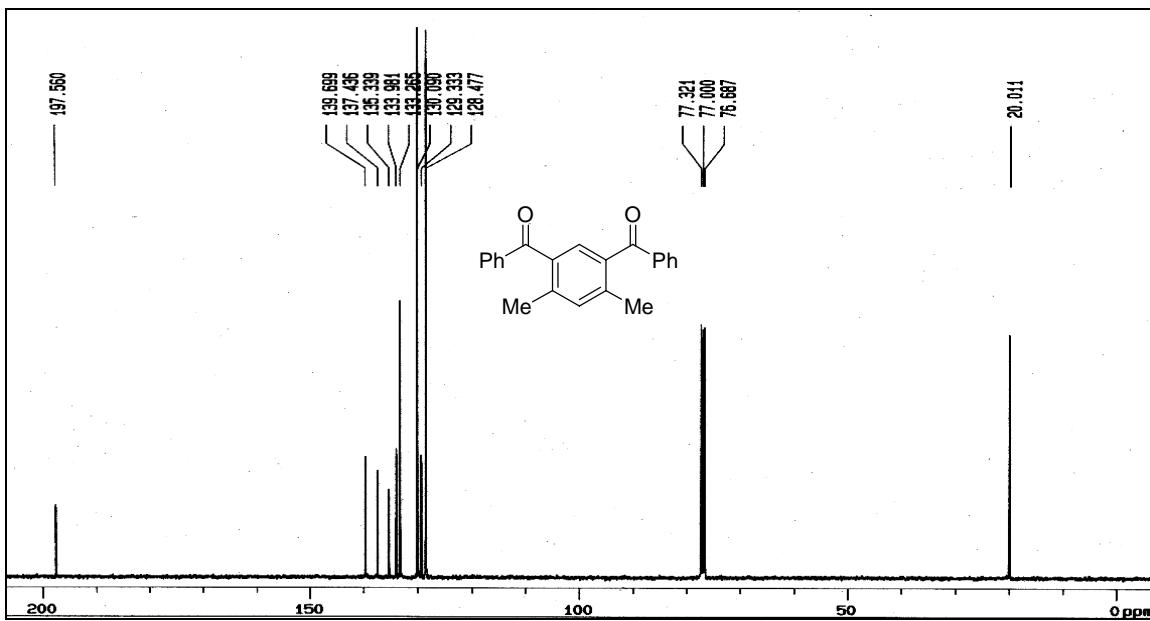


Figure S24. ^{13}C NMR spectrum of ketone 4.

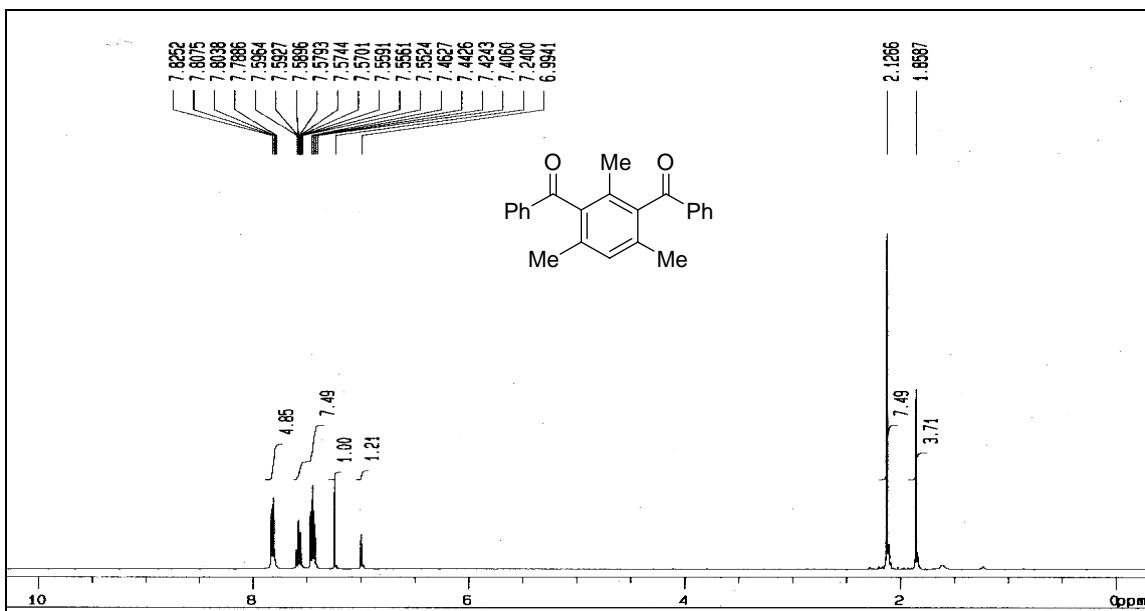


Figure S25. ¹H NMR spectrum of ketone 5.

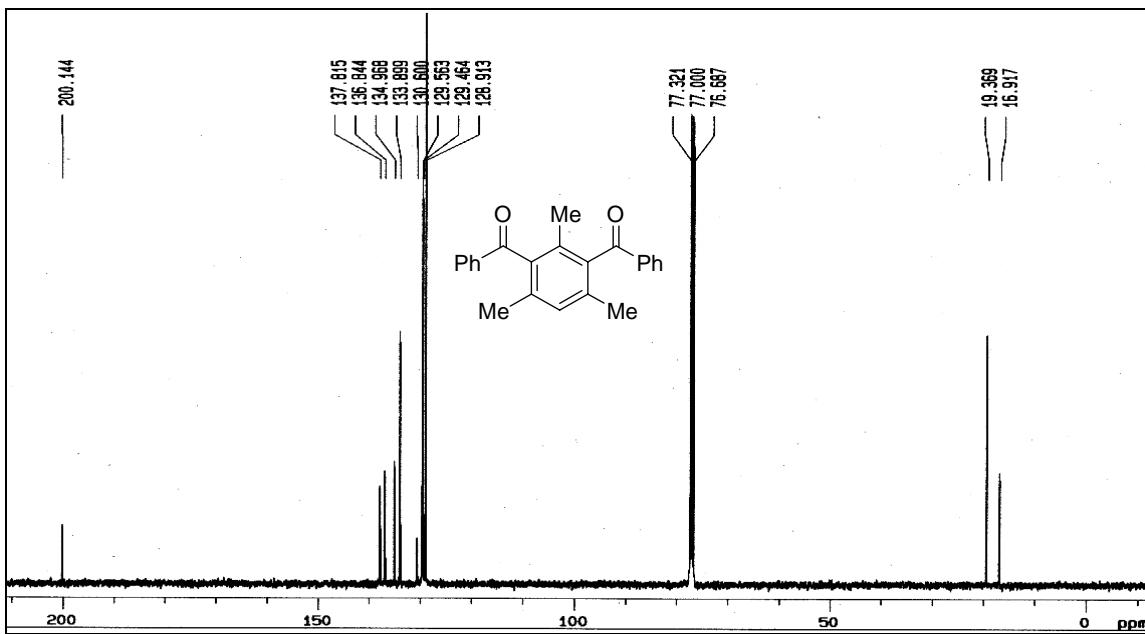


Figure S26. ¹³C NMR spectrum of ketone 5.

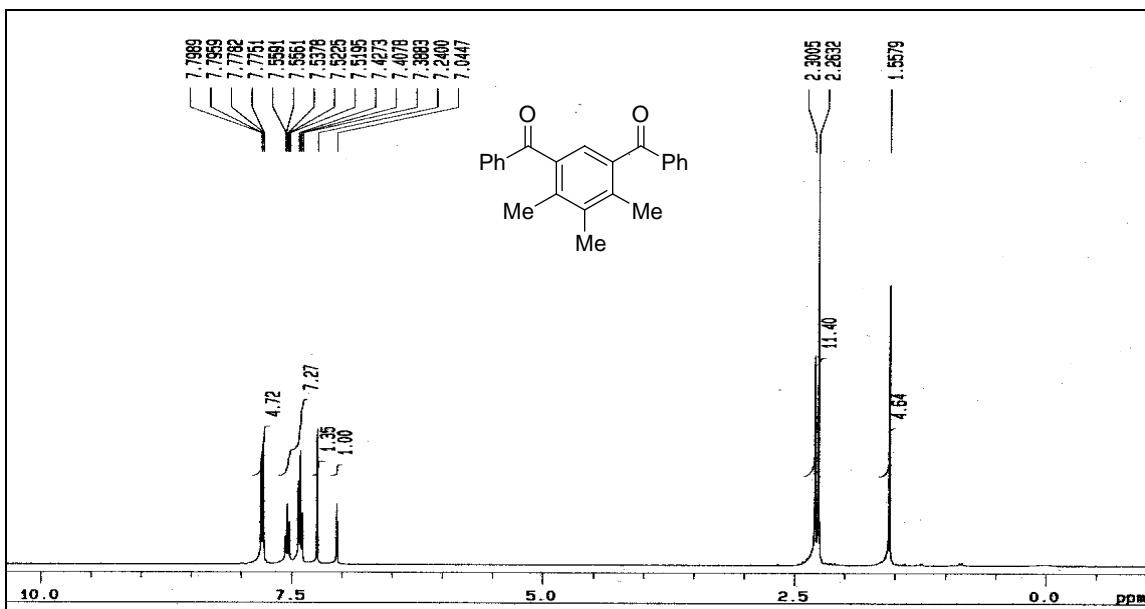


Figure S27. ¹H NMR spectrum of ketone **6**.

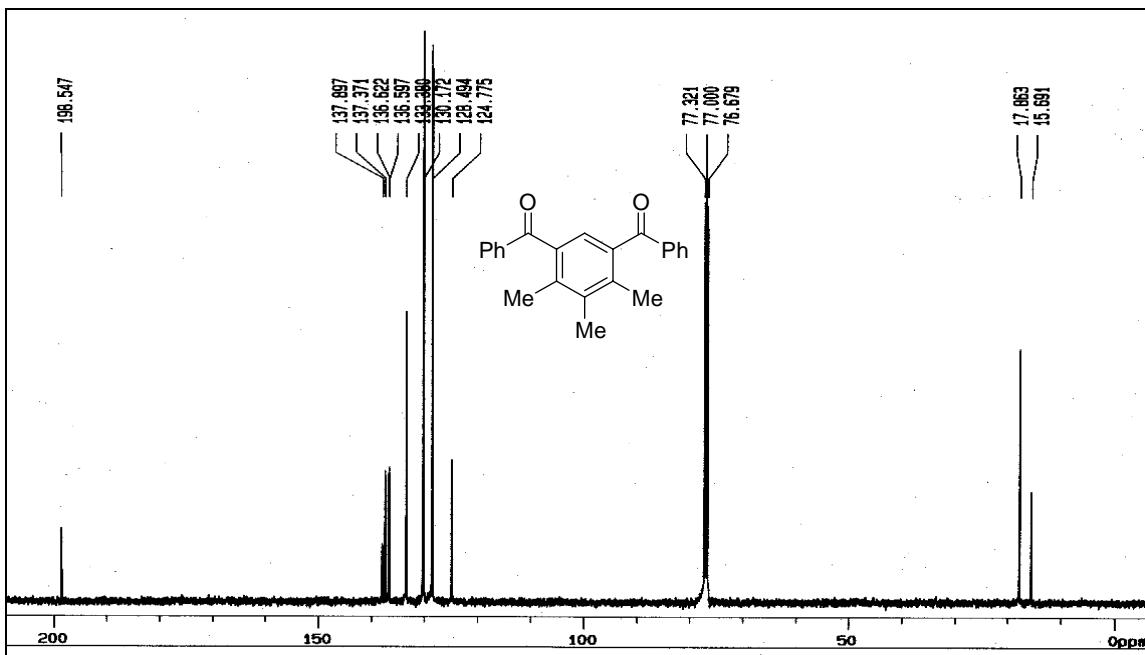


Figure S28. ¹³C NMR spectrum of ketone **6**.

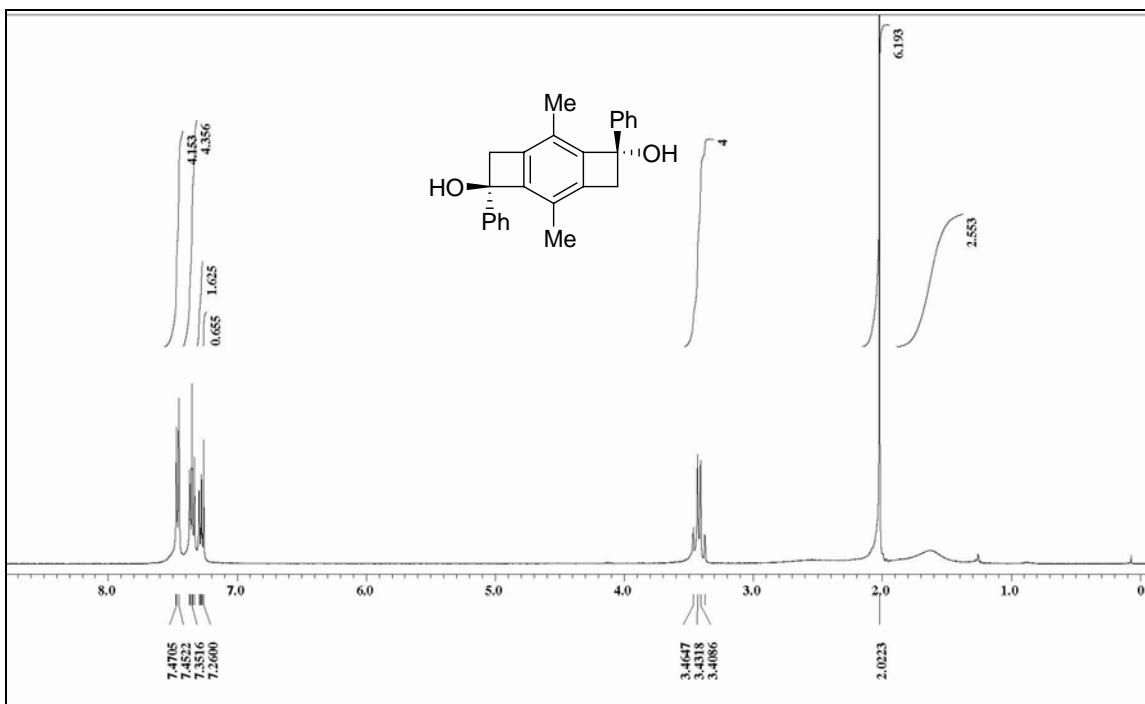


Figure S29. ^1H NMR spectrum of *Anti* 1a-BCB.

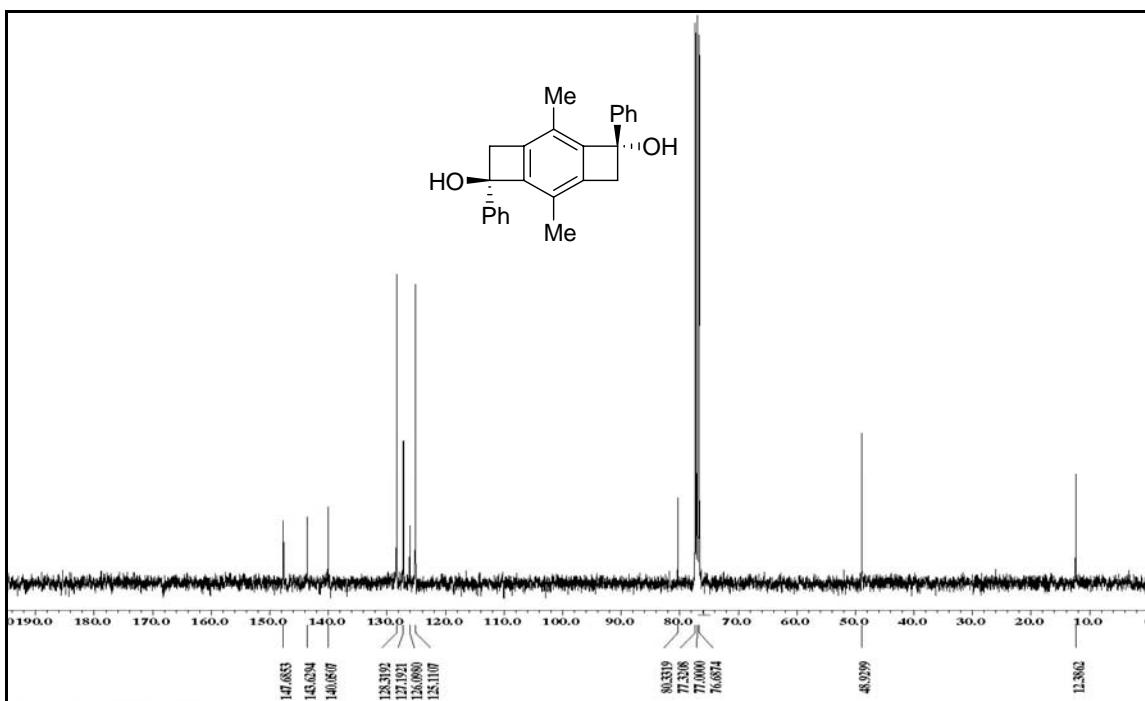


Figure S30. ^{13}C NMR spectrum of *Anti* 1a-BCB.

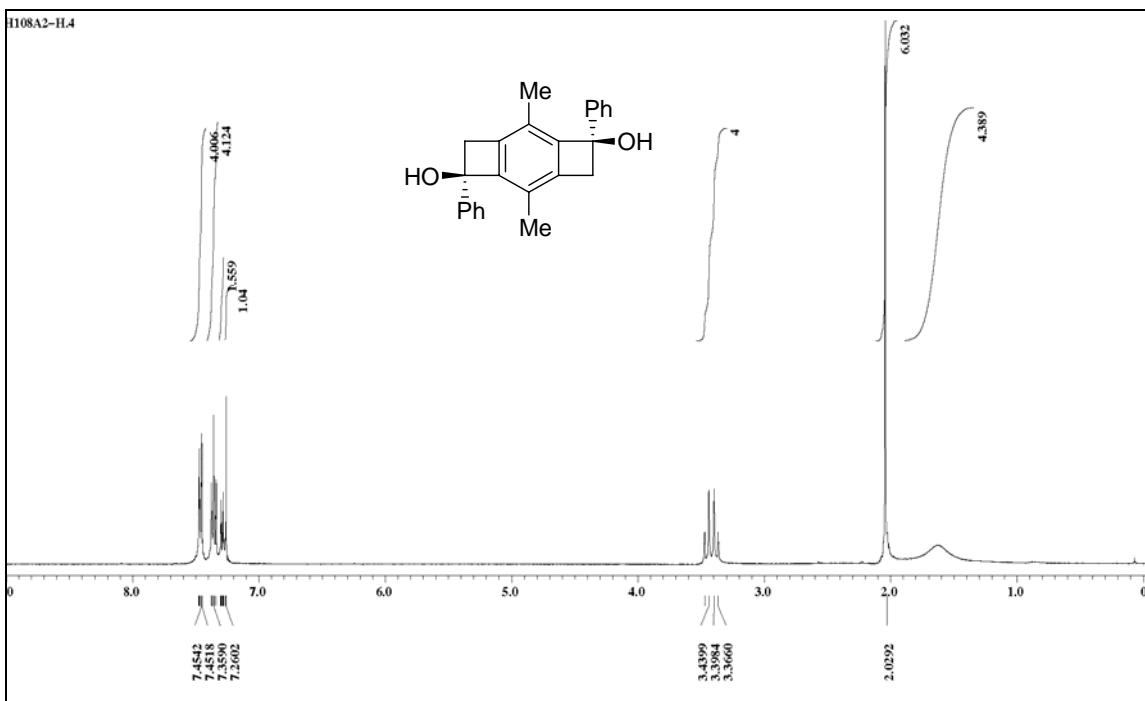


Figure S31. ^1H NMR spectrum of *Syn* 1a-BCB.

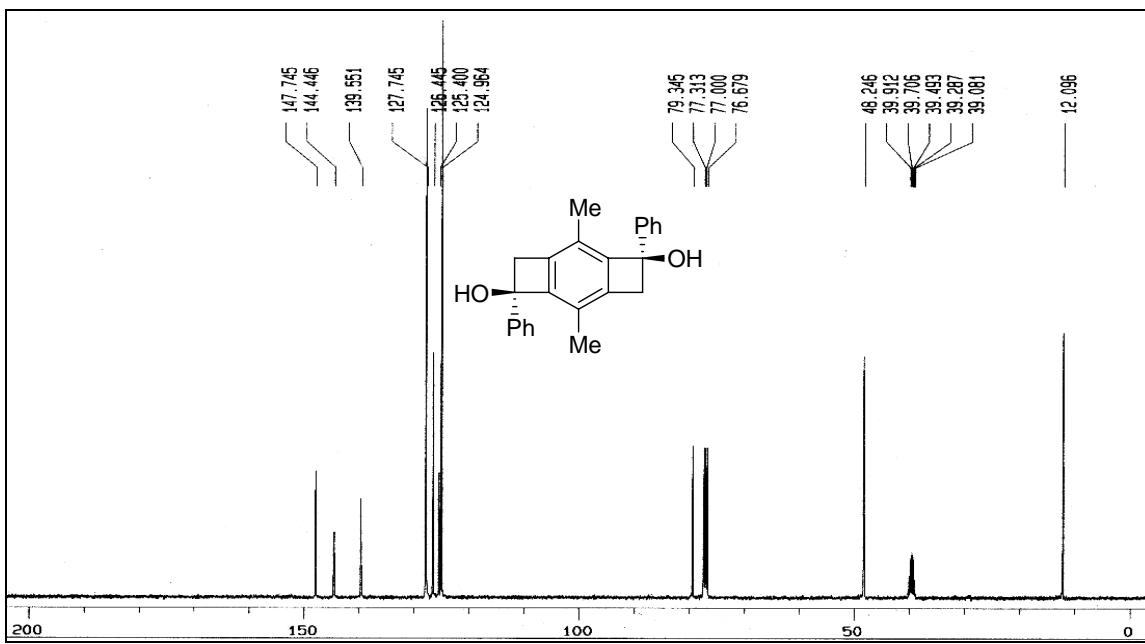


Figure S32. ^{13}C NMR spectrum of *Syn* 1a-BCB.

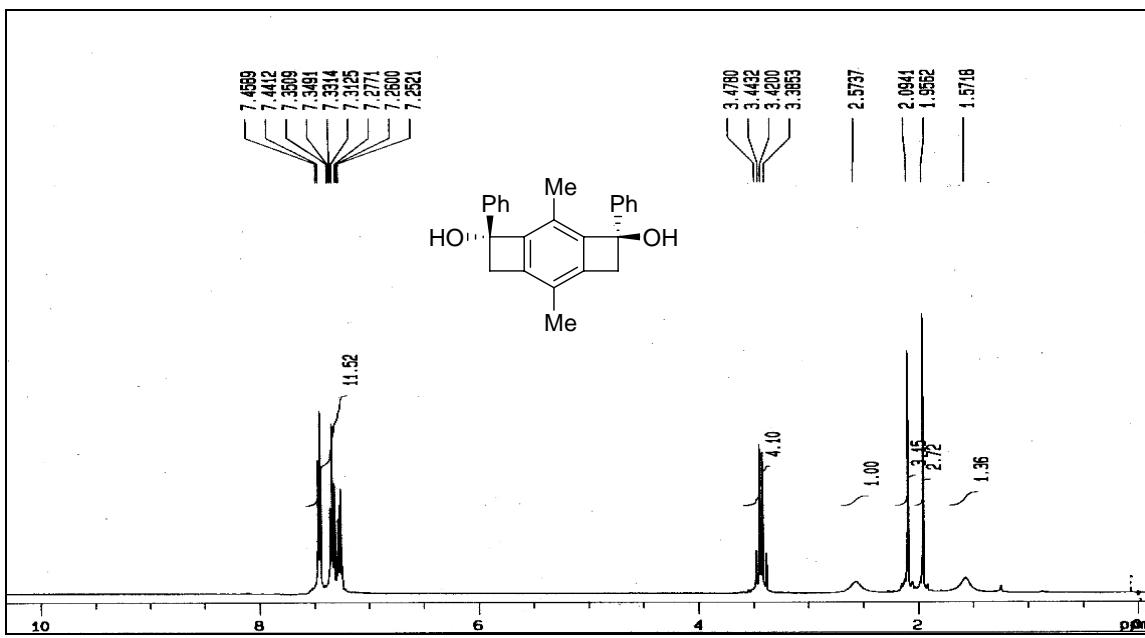


Figure S33. ¹H NMR spectrum of *Anti* 2a-BCB.

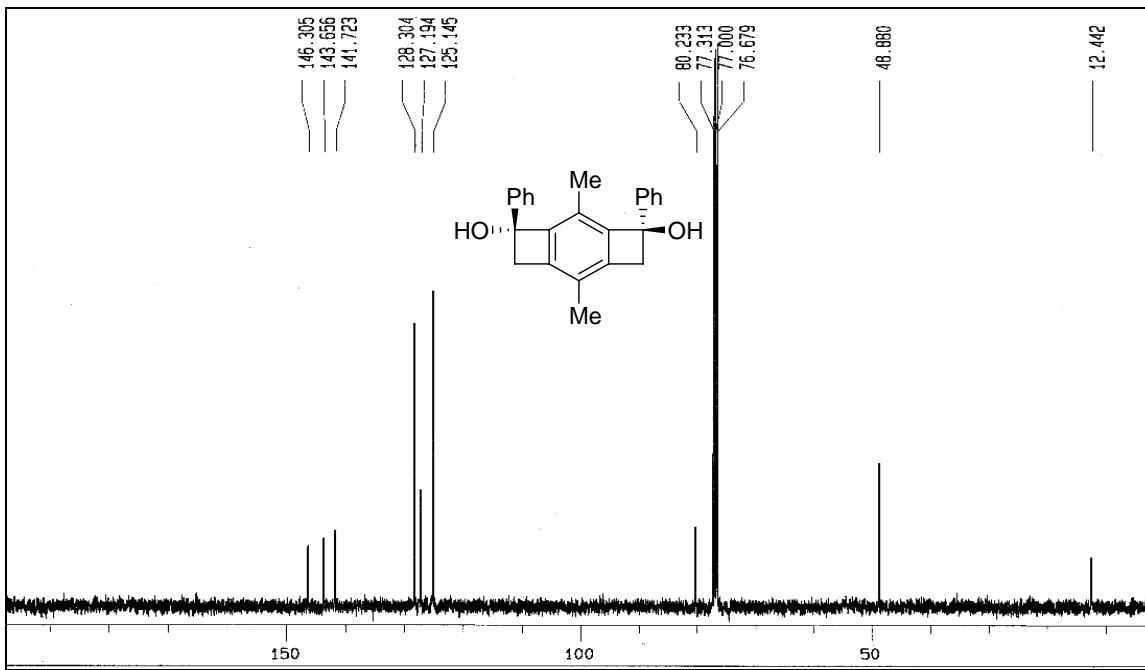


Figure S34. ¹³C NMR spectrum of *Anti* 2a-BCB.

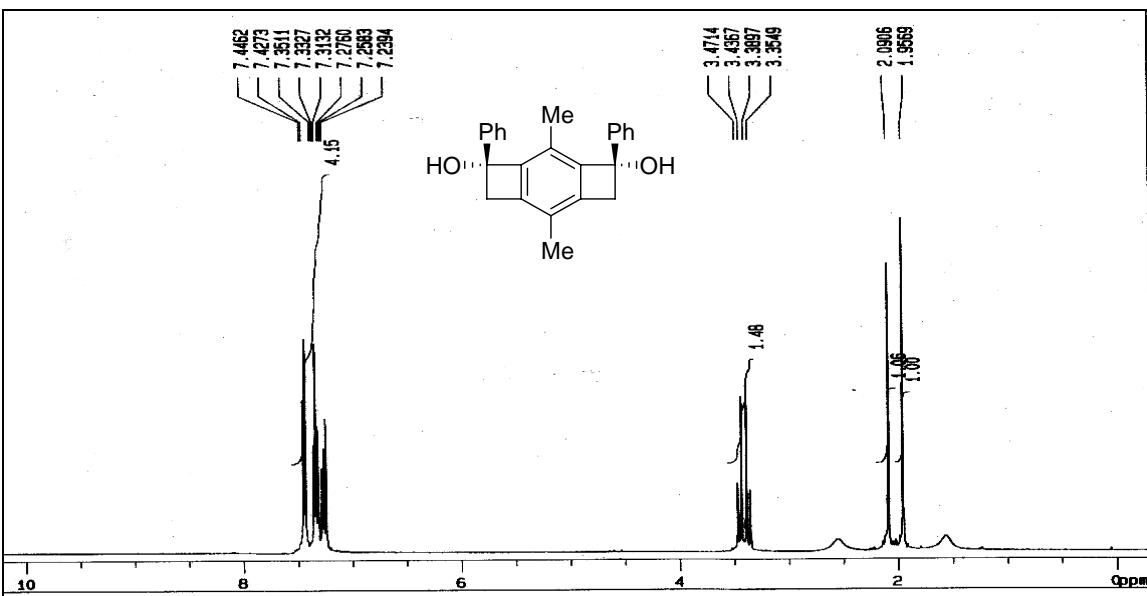


Figure S35. ^1H NMR spectrum of *Syn* 2a-BCB.

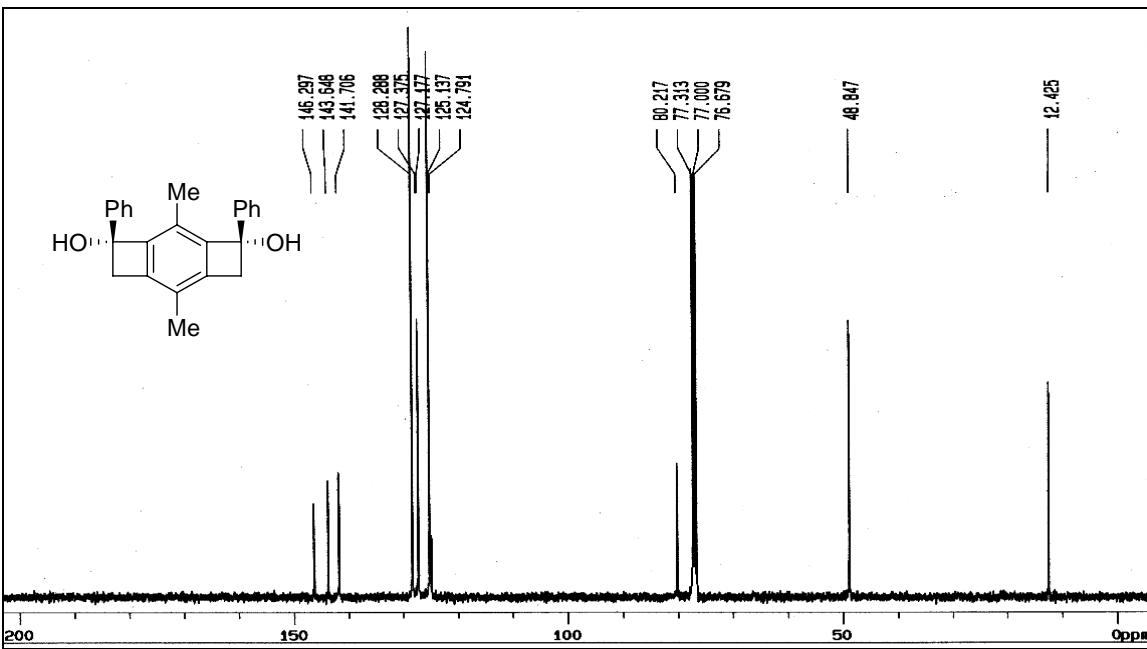


Figure S36. ^{13}C NMR spectrum of *Syn* 2a-BCB.

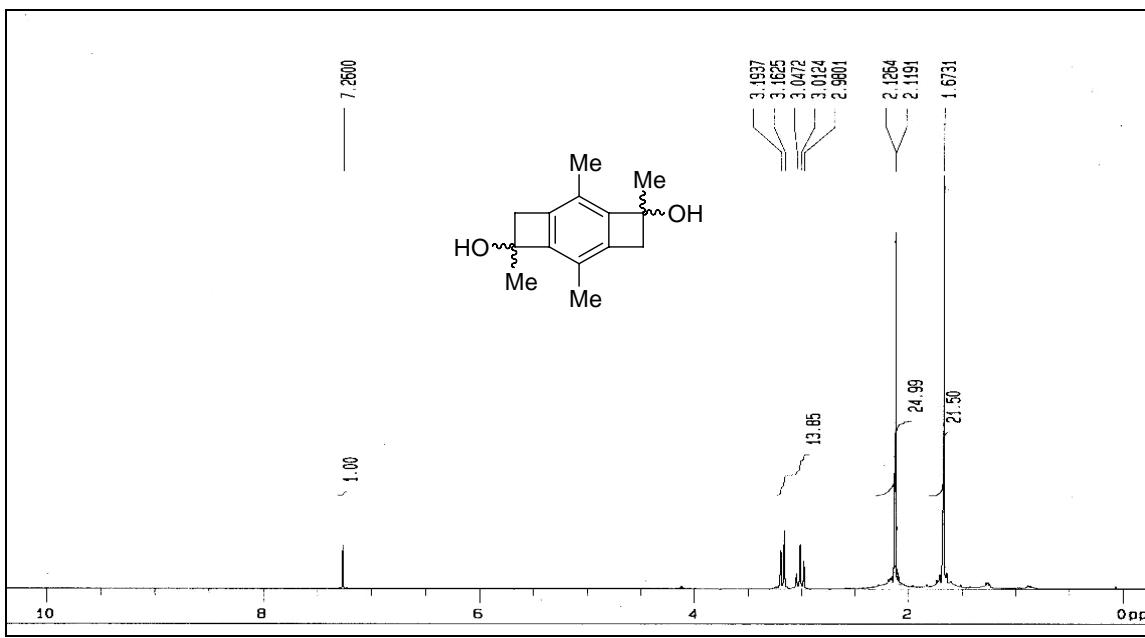


Figure S37. ^1H NMR spectrum of *Anti + Syn* 1b-BCB.

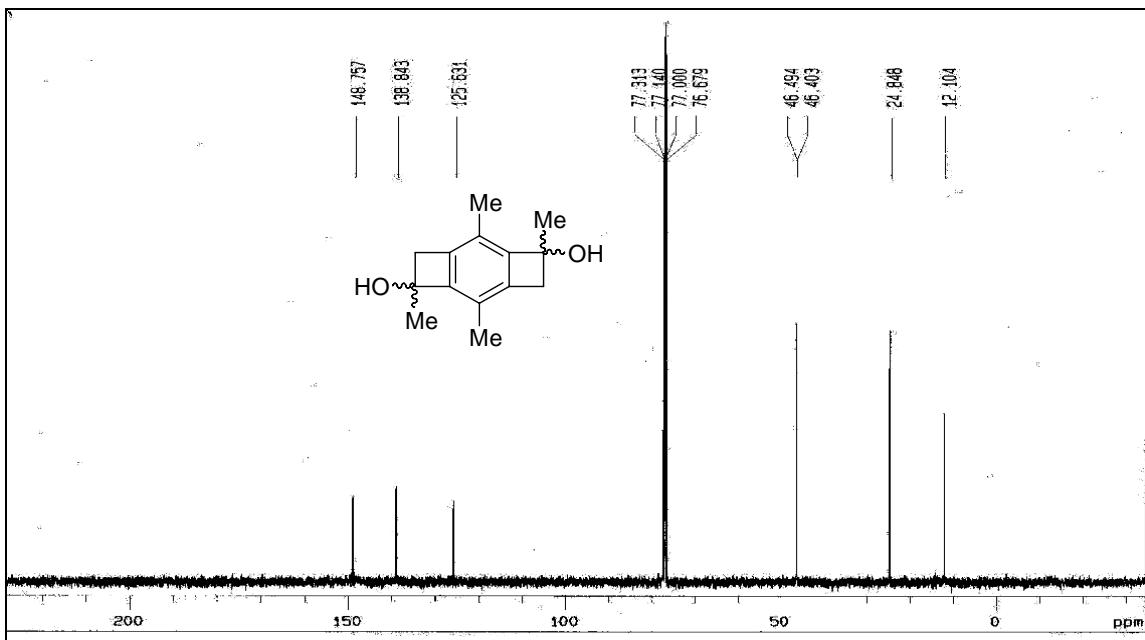


Figure S38. ^{13}C NMR spectrum of *Anti + Syn* 1b-BCB.

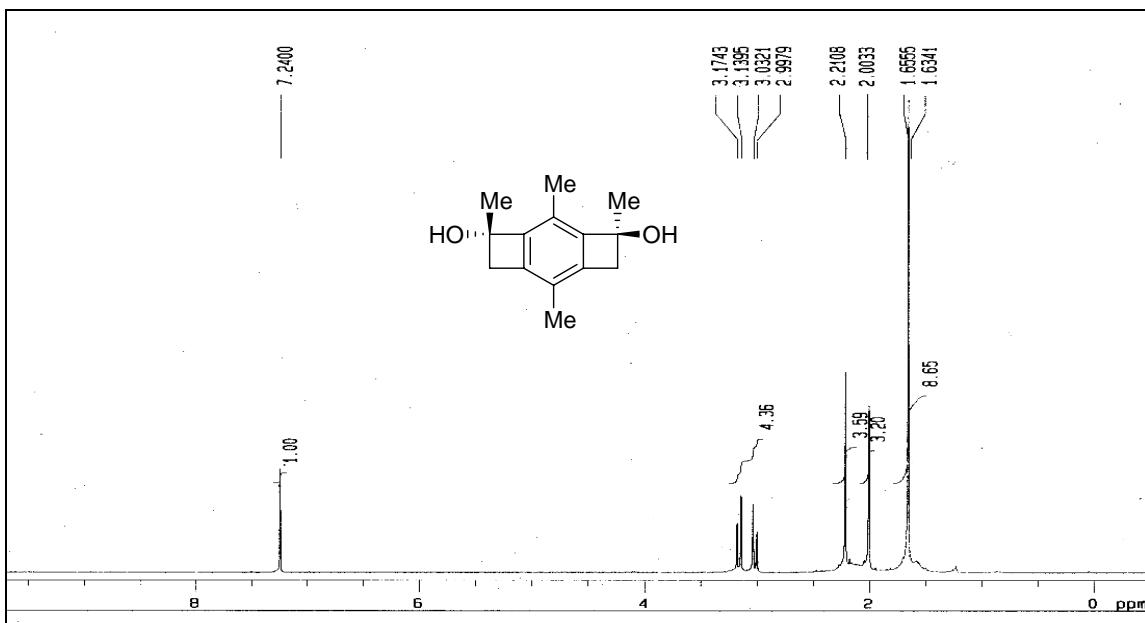


Figure S39. ^1H NMR spectrum of *Anti* 2b-BCB.

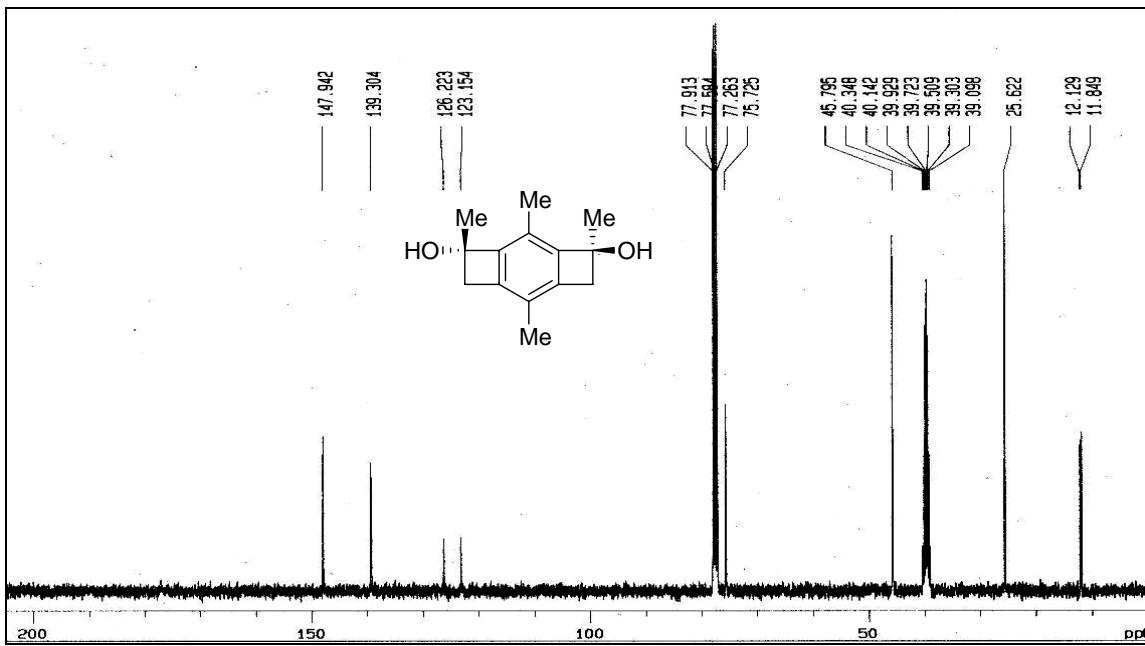


Figure S40. ^{13}C NMR spectrum of *Anti* 2b-BCB.

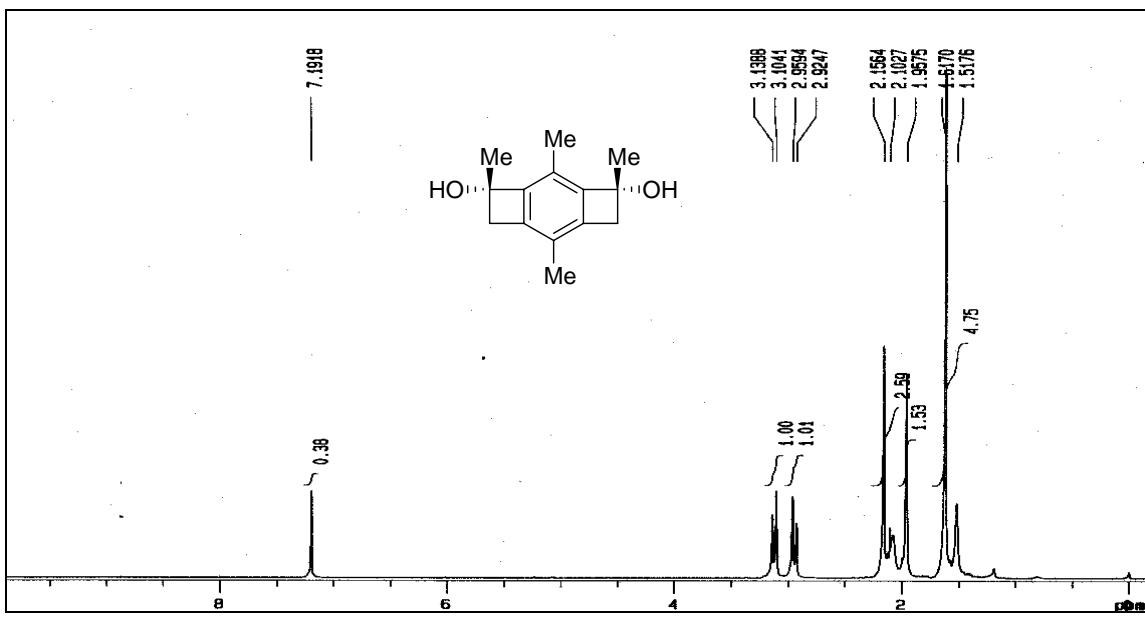


Figure S41. ¹H NMR spectrum of *Syn* 2b-BCB.

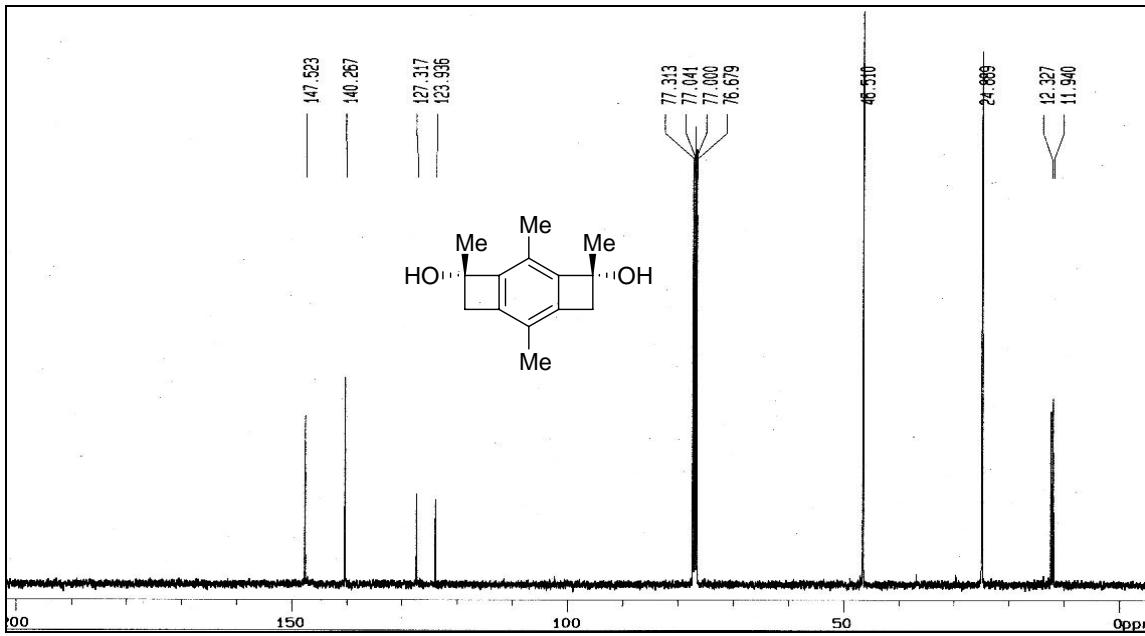


Figure S42. ¹³C NMR spectrum of *Syn* 2b-BCB.

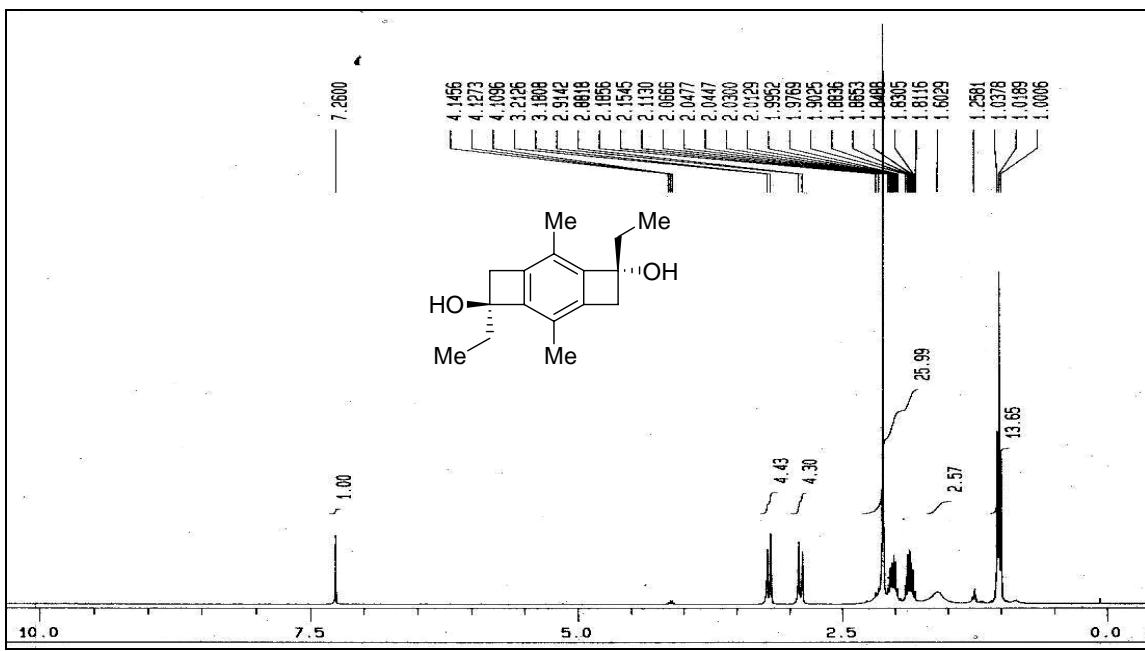


Figure S43. ¹H NMR spectrum of *Anti* 1c-BCB.

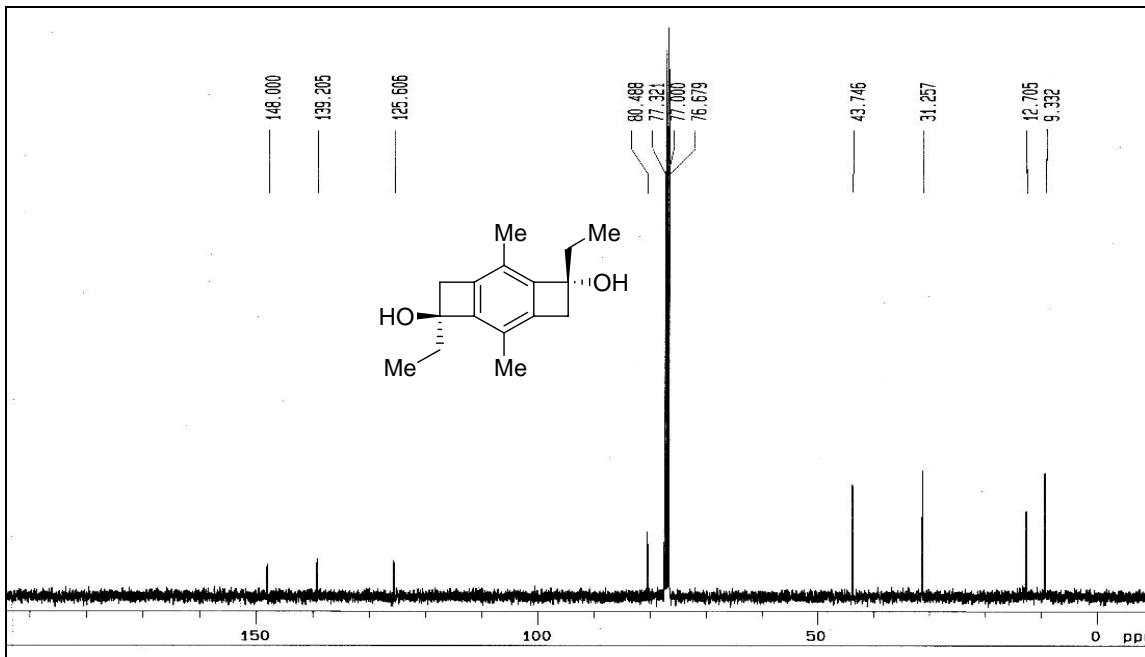


Figure S44. ¹³C NMR spectrum of *Anti* 1c-BCB.

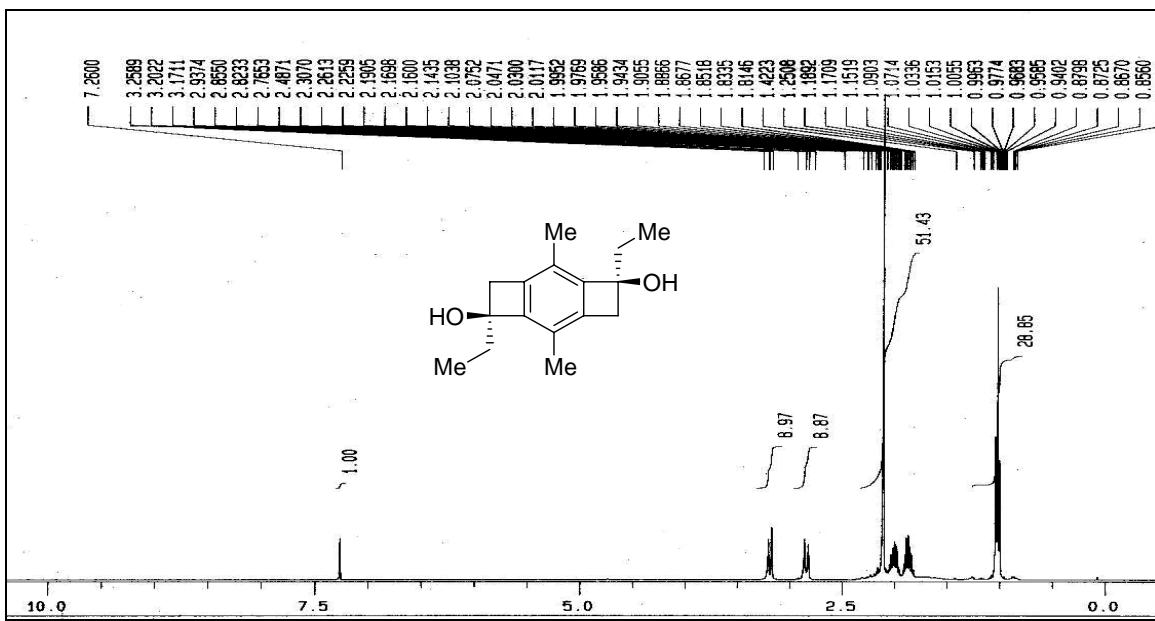


Figure S45. ¹H NMR spectrum of *Syn* 1c-BCB.

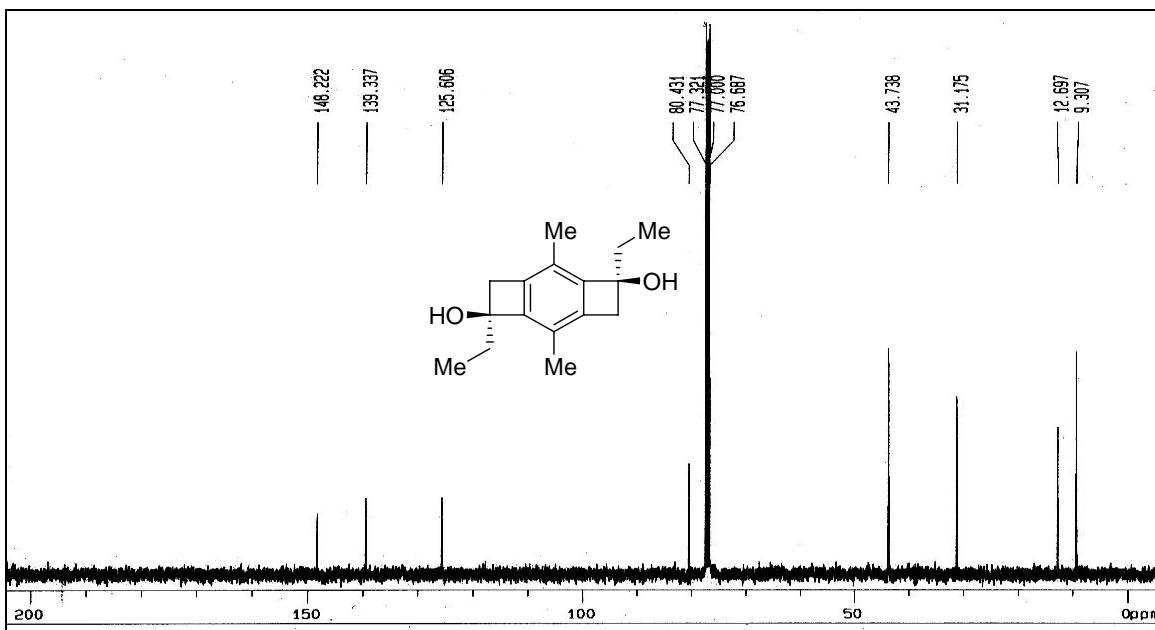


Figure S46. ¹³C NMR spectrum of *Syn* 1c-BCB.

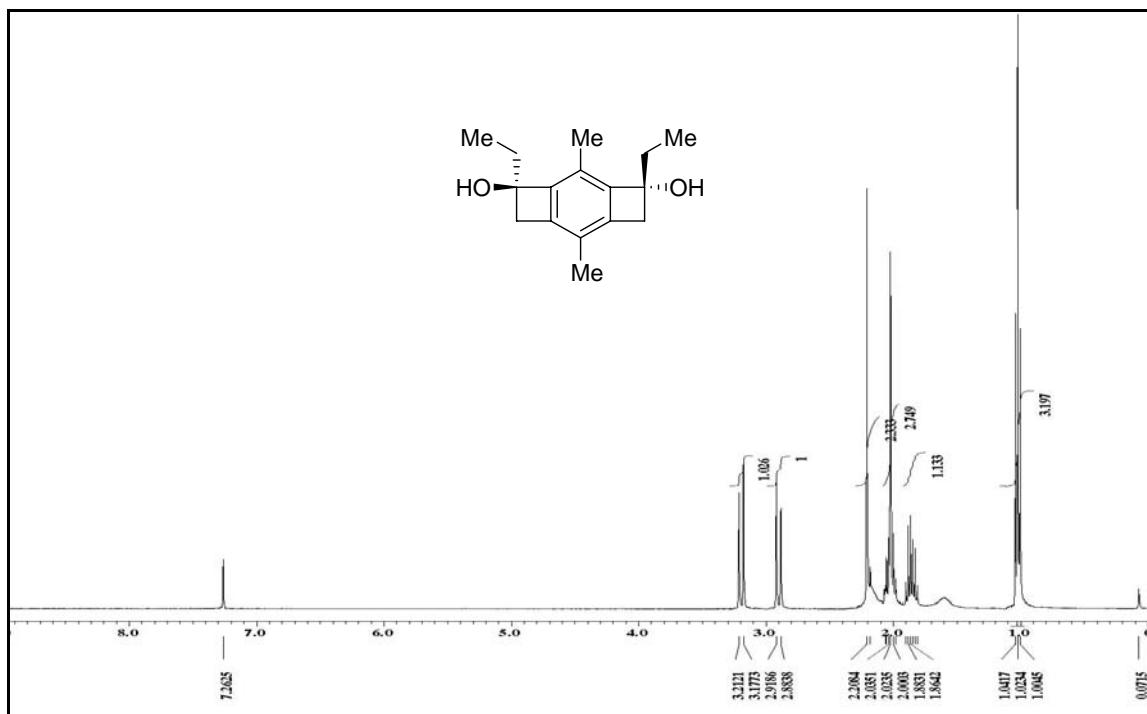


Figure S47. ^1H NMR spectrum of *Anti* 2c-BCB.

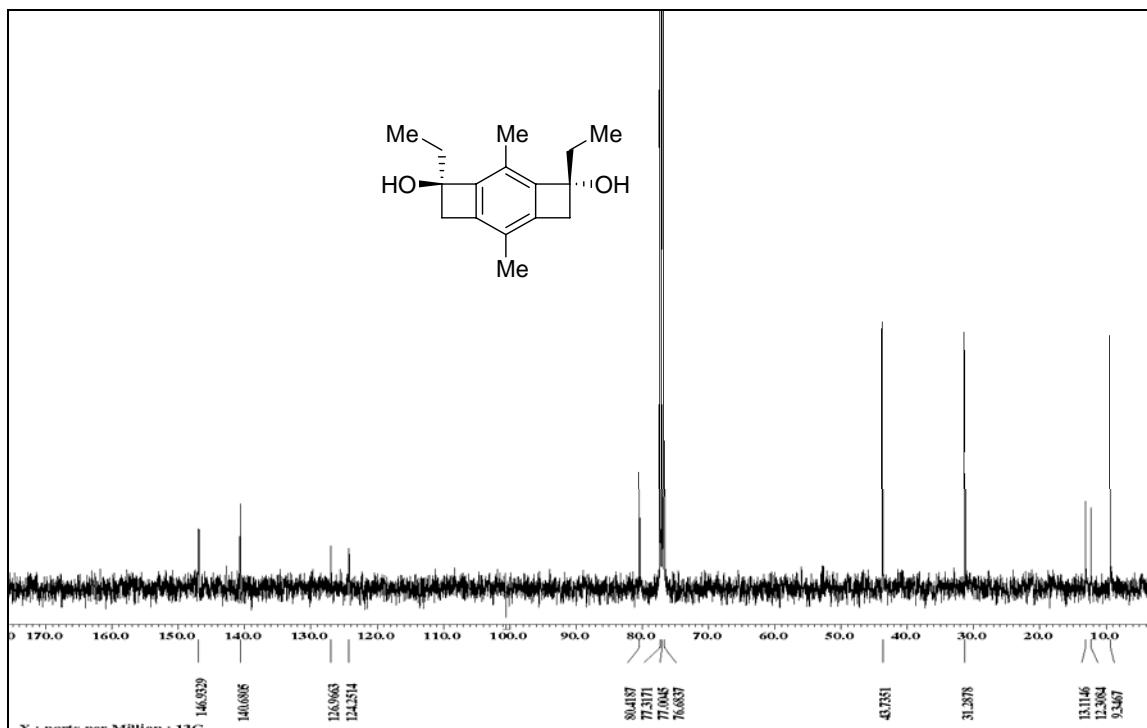


Figure S48. ^{13}C NMR spectrum of *Anti* 2c-BCB.

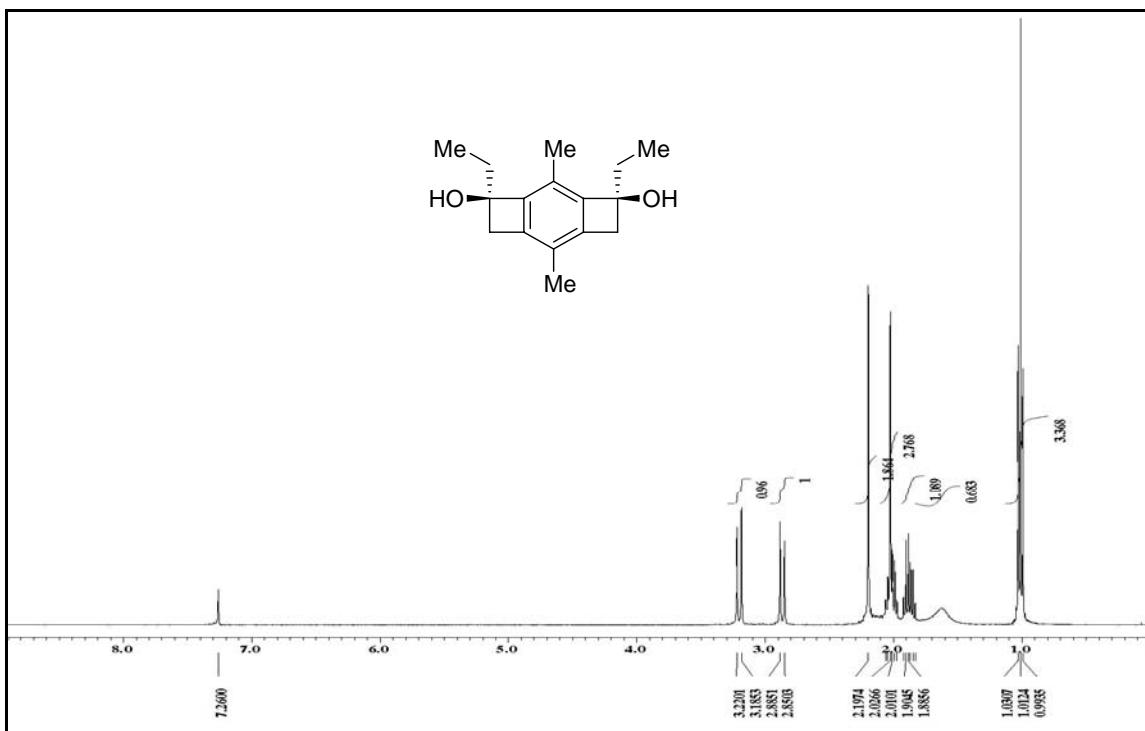


Figure S49. ^1H NMR spectrum of *Syn 2c-BCB*.

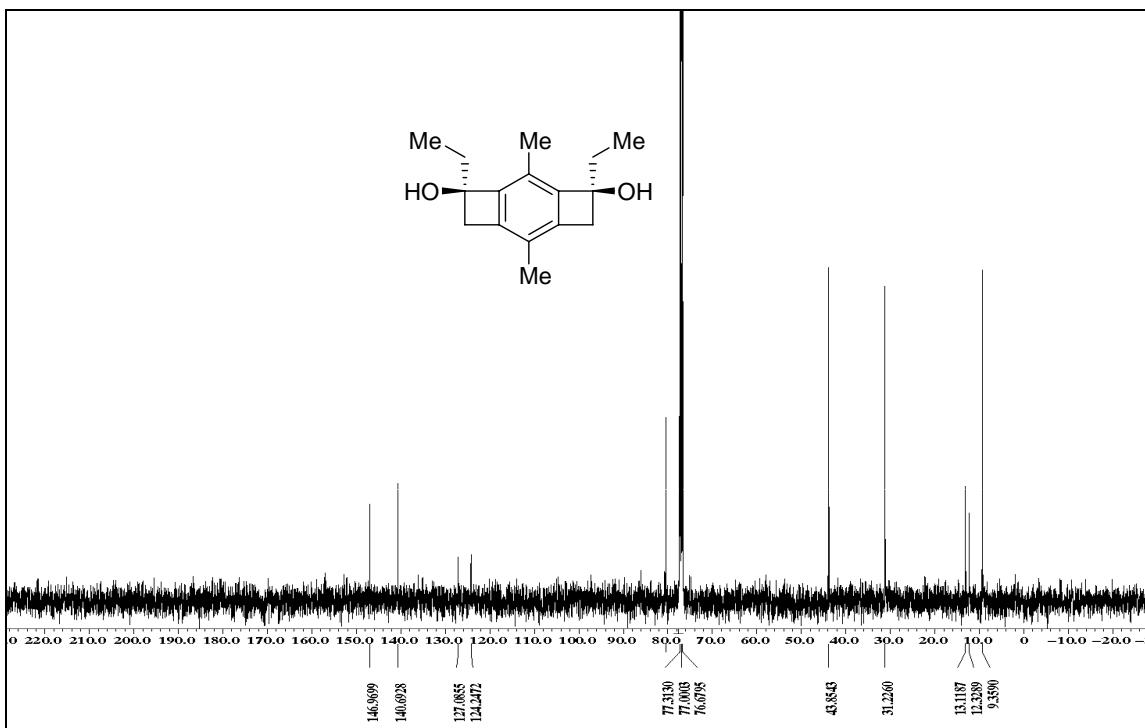


Figure S50. ^{13}C NMR spectrum of *Syn 2c-BCB*.

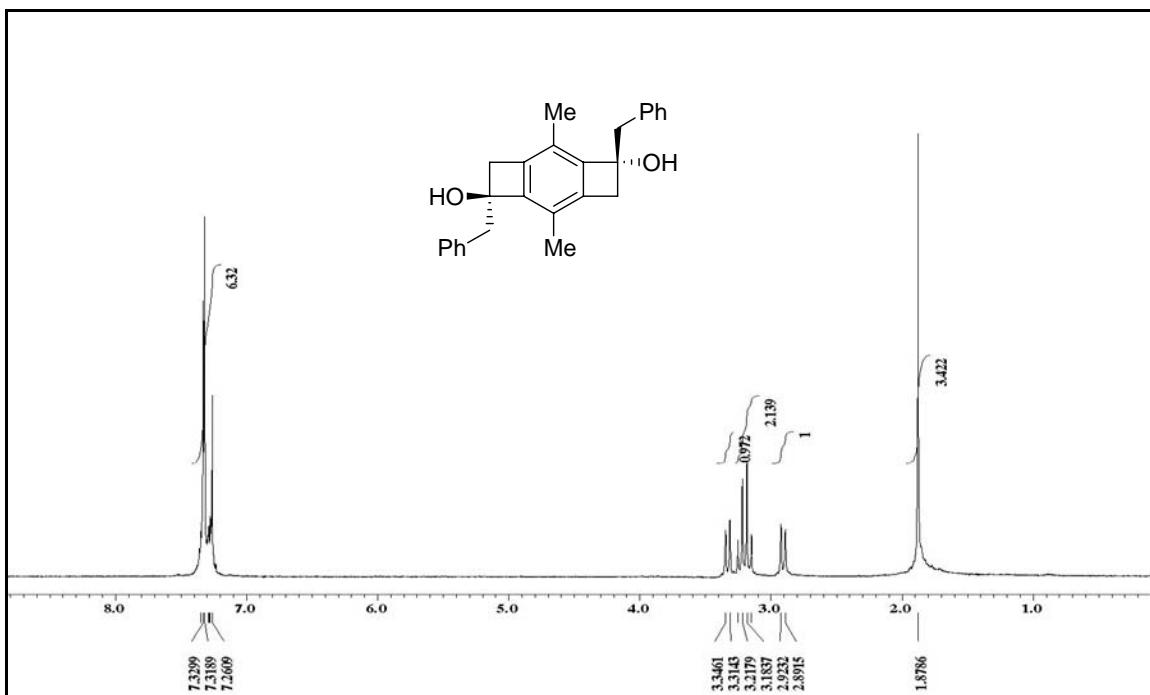


Figure S51. ^1H NMR spectrum of *Anti* 1d-BCB.

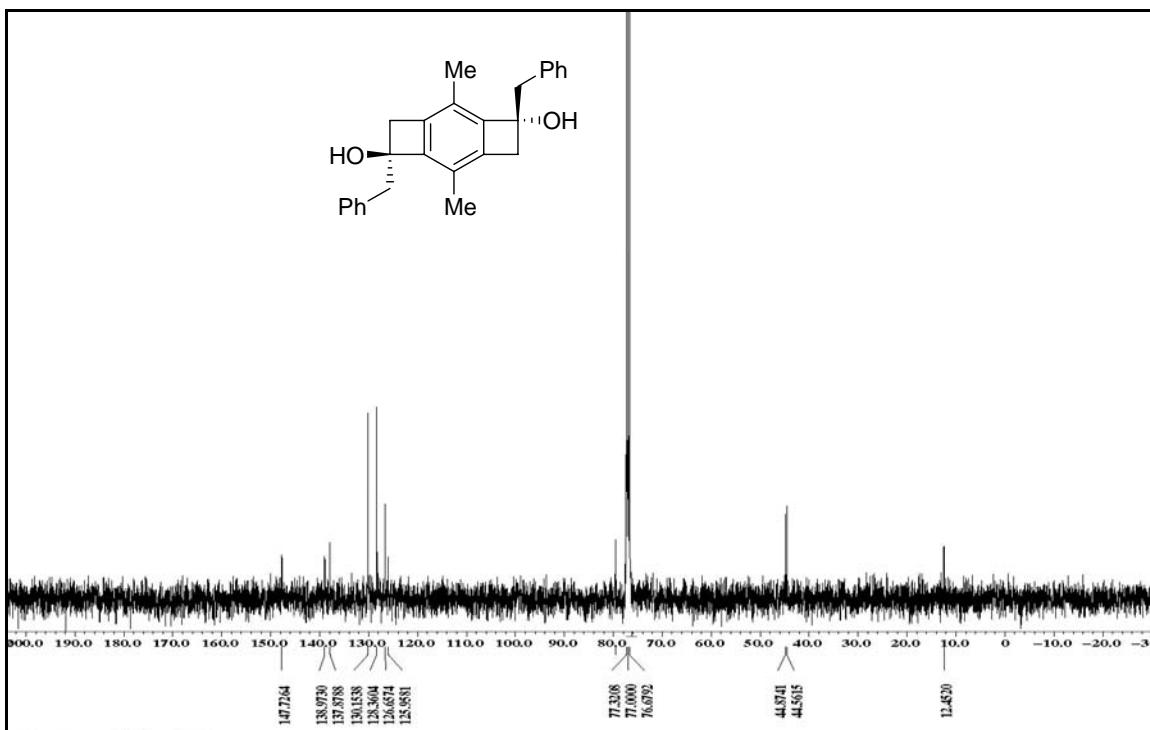


Figure S52. ^{13}C NMR spectrum of *Anti* 1d-BCB.

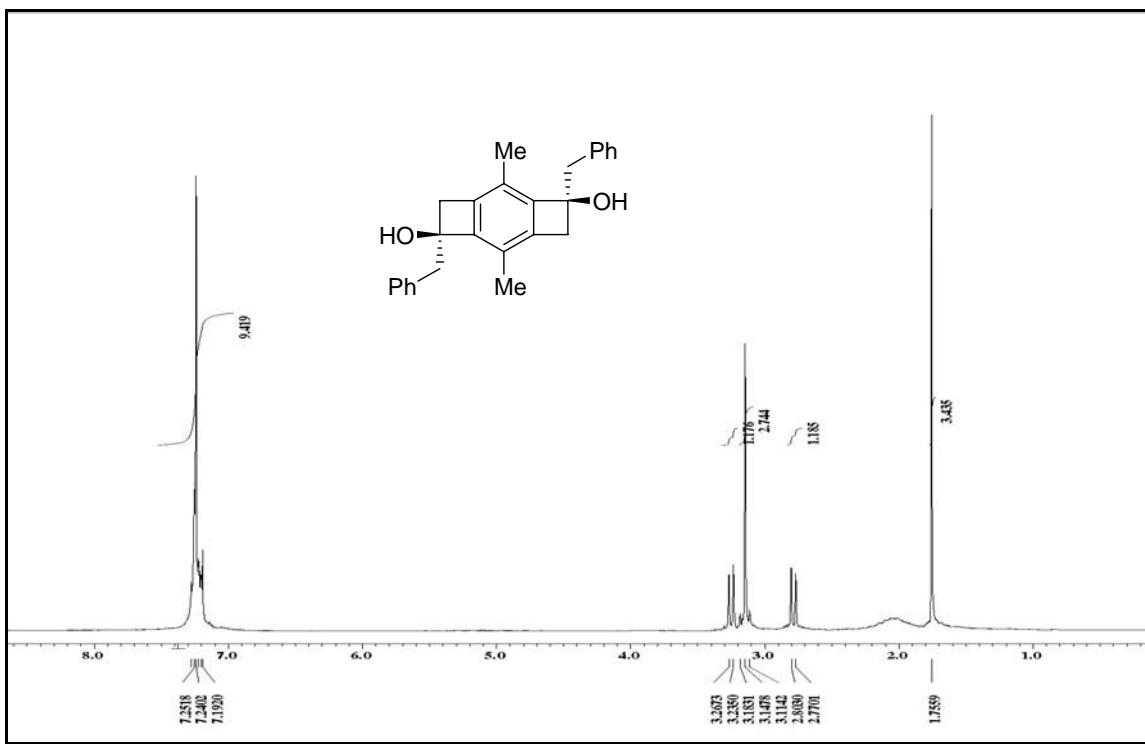


Figure S53. ^1H NMR spectrum of *Syn 1d-BCB*.

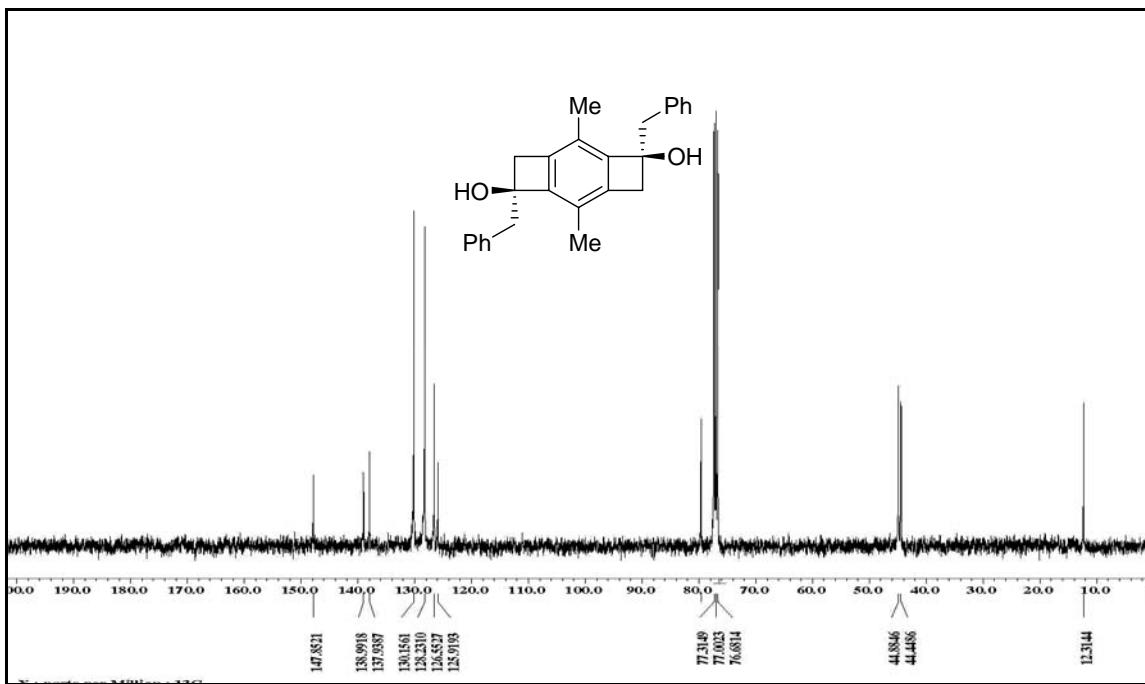


Figure 54. ^{13}C NMR spectrum of *Syn 1d-BCB*.

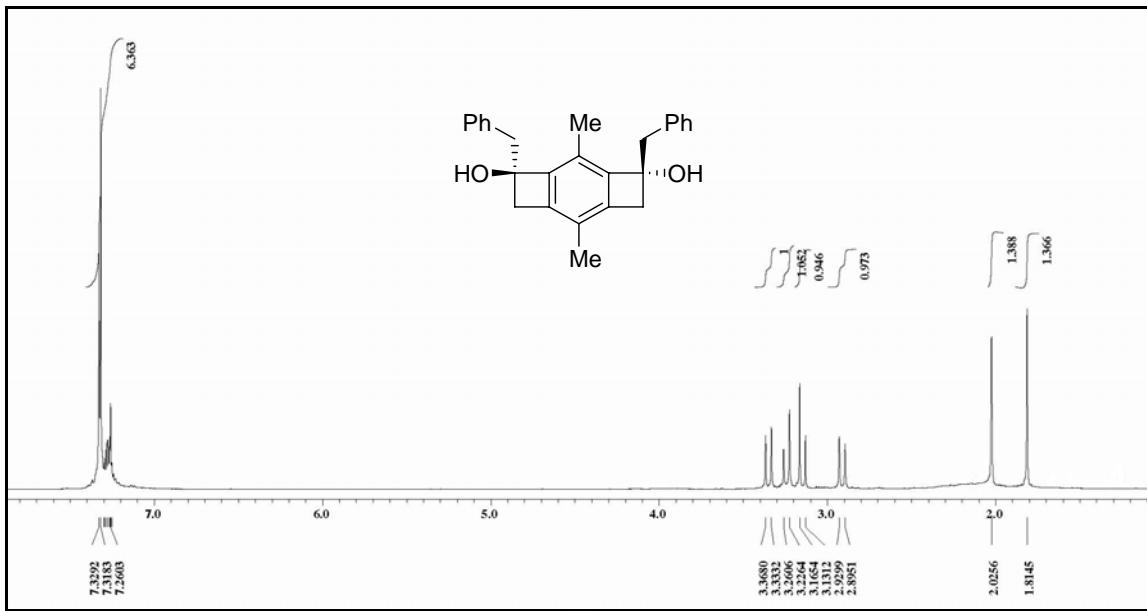


Figure S55. ^1H NMR spectrum of *Anti* 2d-BCB.

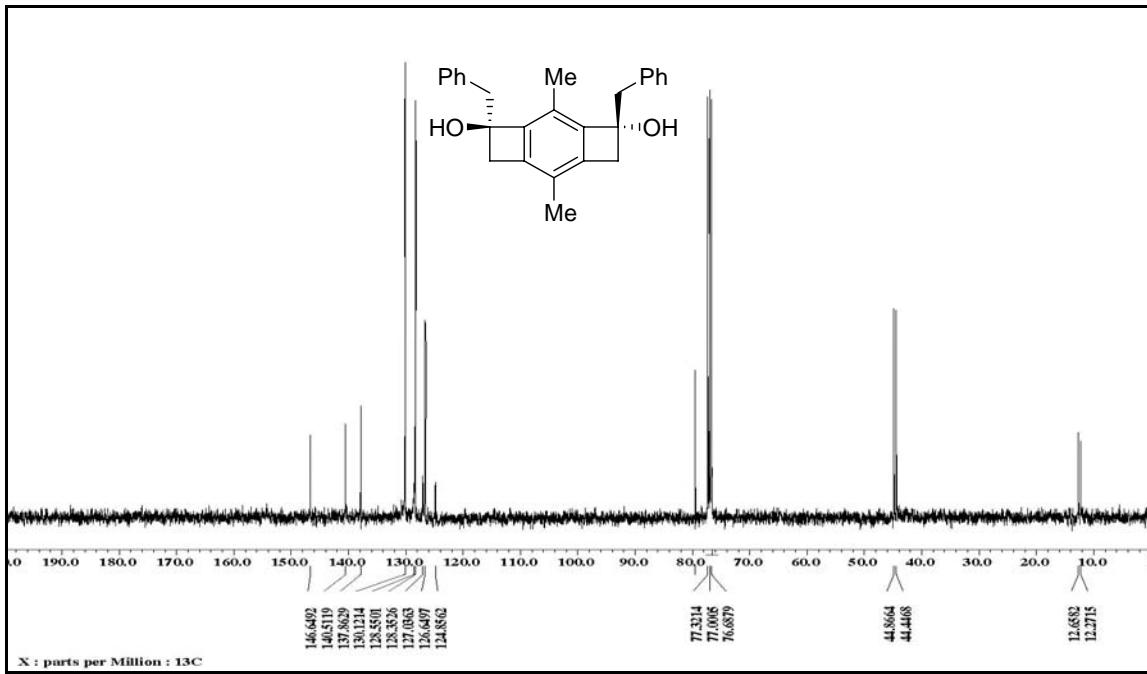


Figure S56. ^{13}C NMR spectrum of *Anti* 2d-BCB.

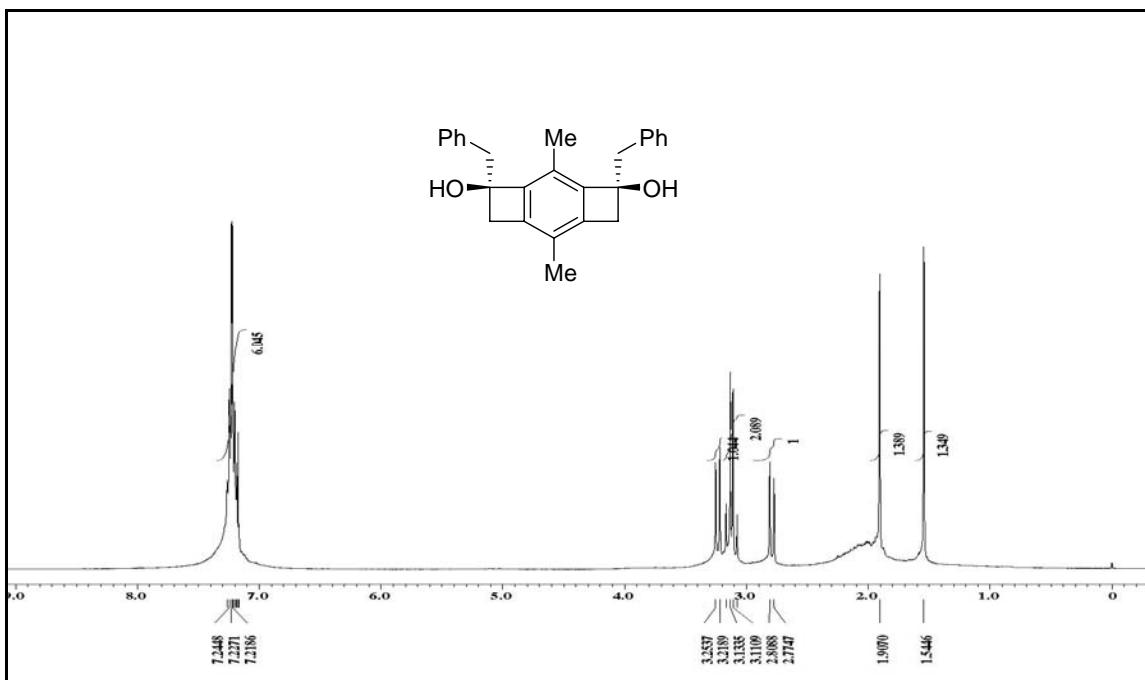


Figure S57. ^1H NMR spectrum of *Syn 2d-BCB*.

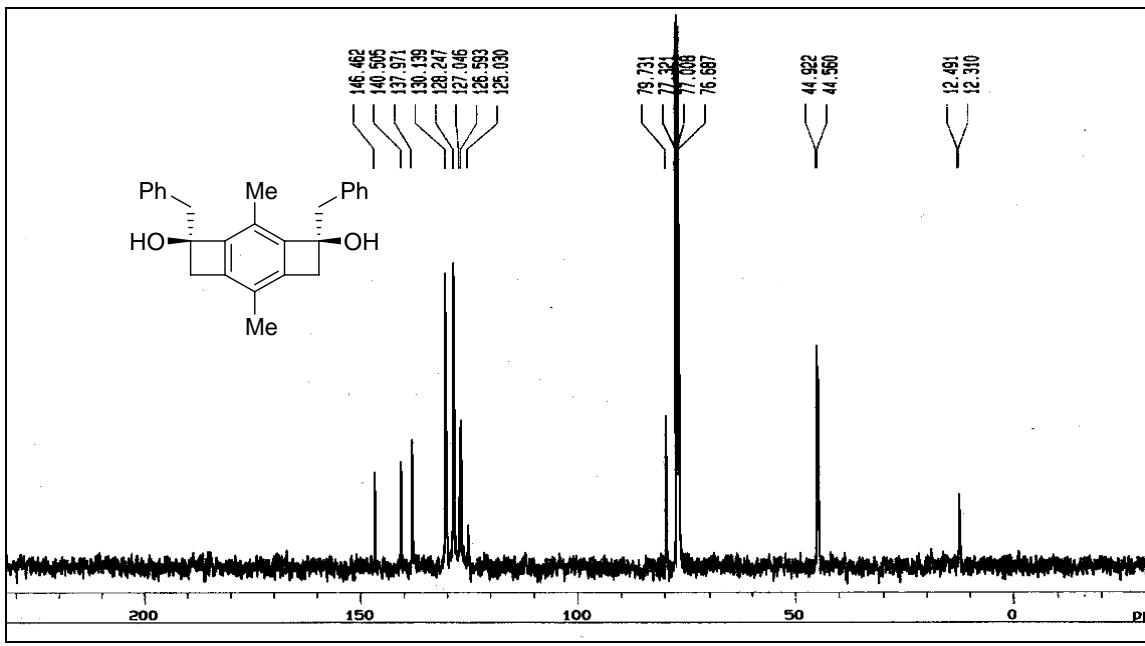


Figure S58. ^{13}C NMR spectrum of *Syn 2d-BCB*.

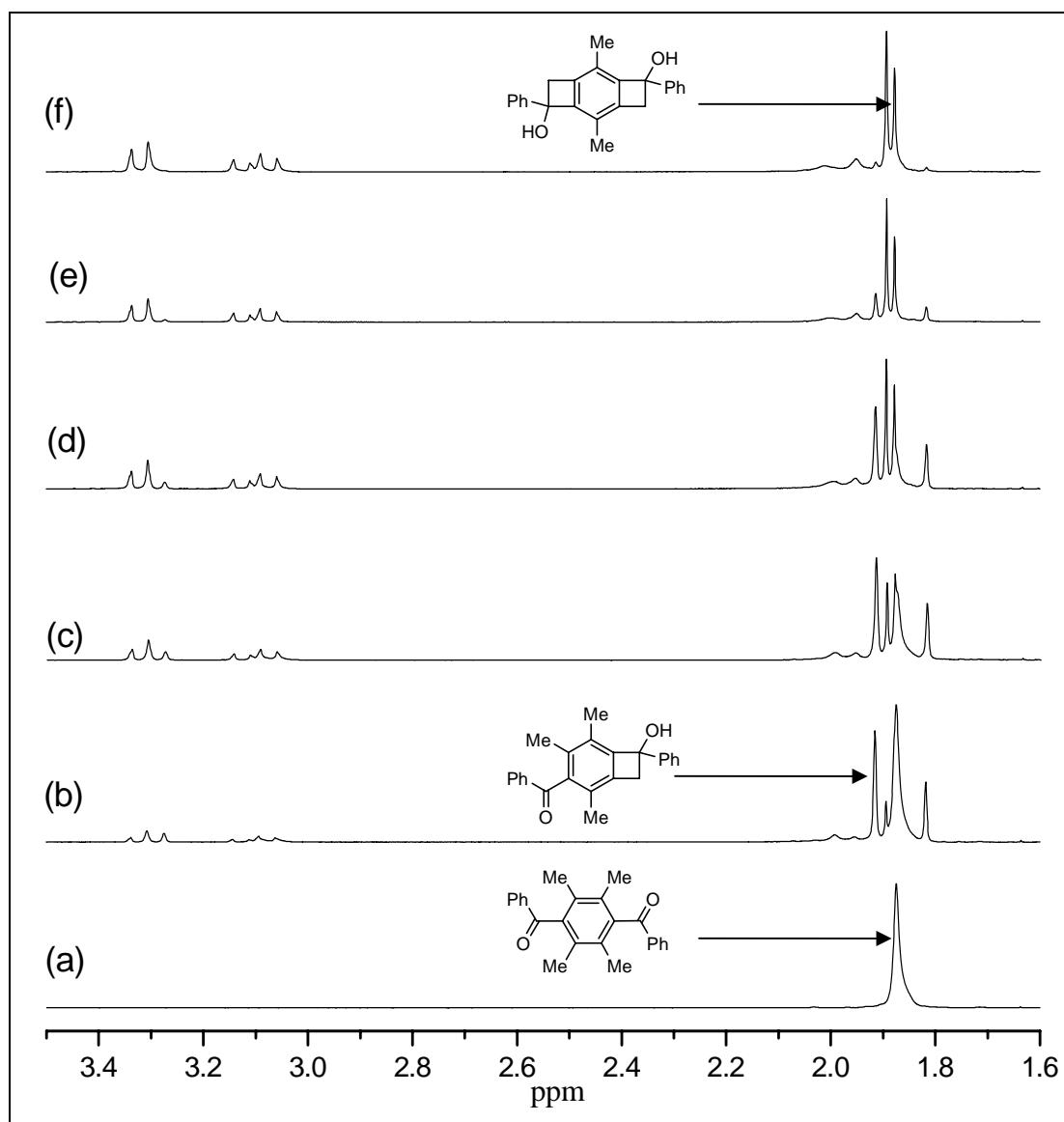


Figure S59. ^1H NMR monitoring of the photolysis of ketone **1a** in C_6D_6 in NMR tube under a N_2 gas atmosphere: (a) 0.0 min; (b) 20 min; (c) 40 min; (d) 60 min; (e) 90 min; (f) 135 min.

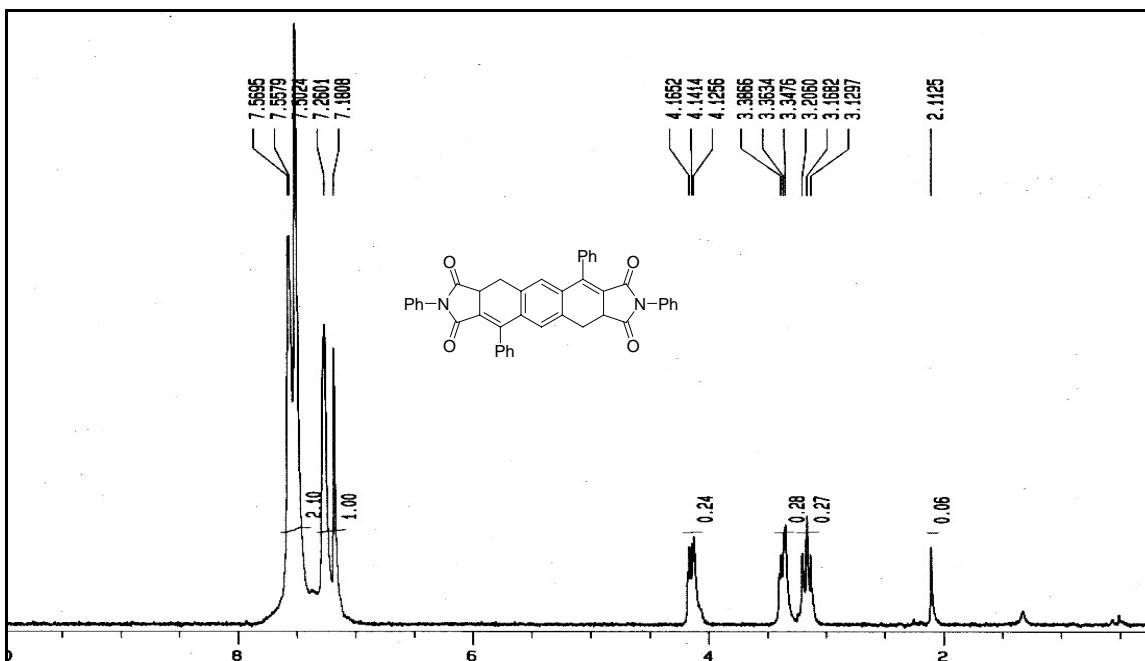


Figure S60. ¹H NMR spectrum of 3-DCA.

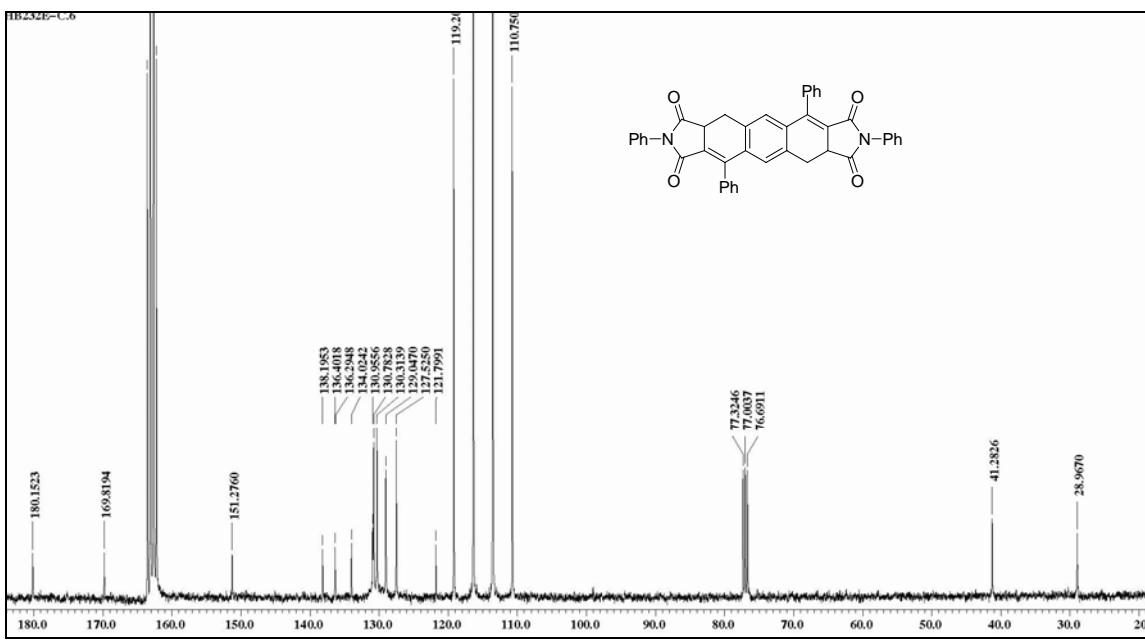


Figure S61. ¹³C NMR spectrum of 3-DCA.

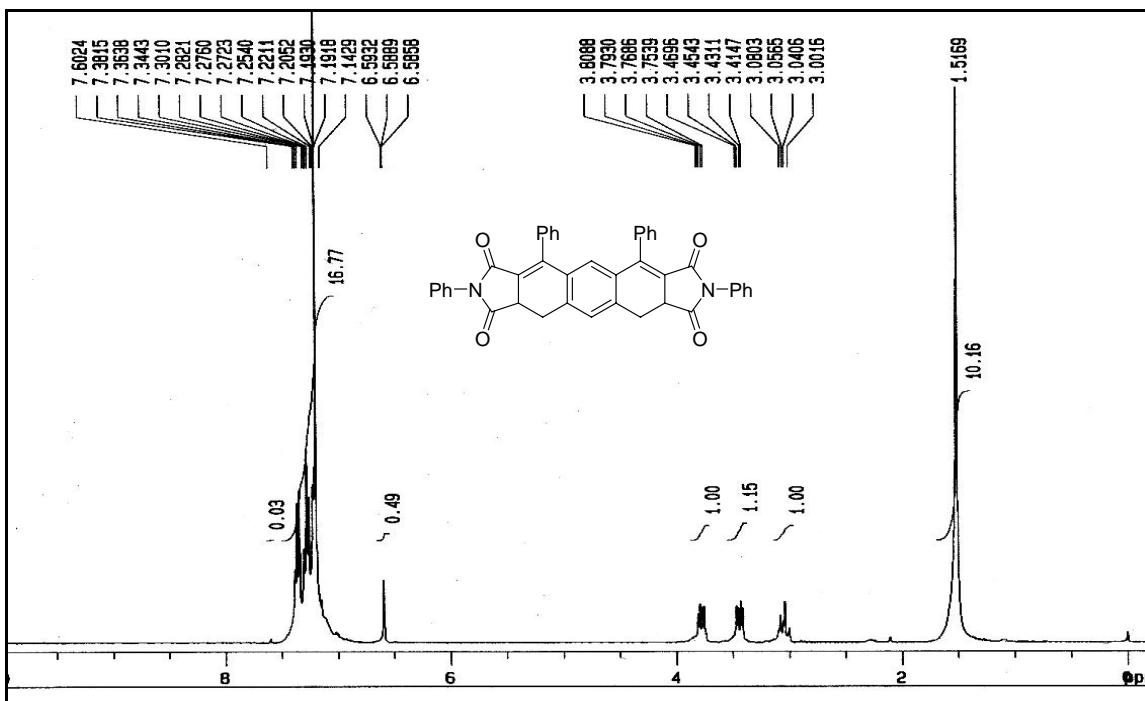


Figure S62. ¹H NMR spectrum of 4-DCA.

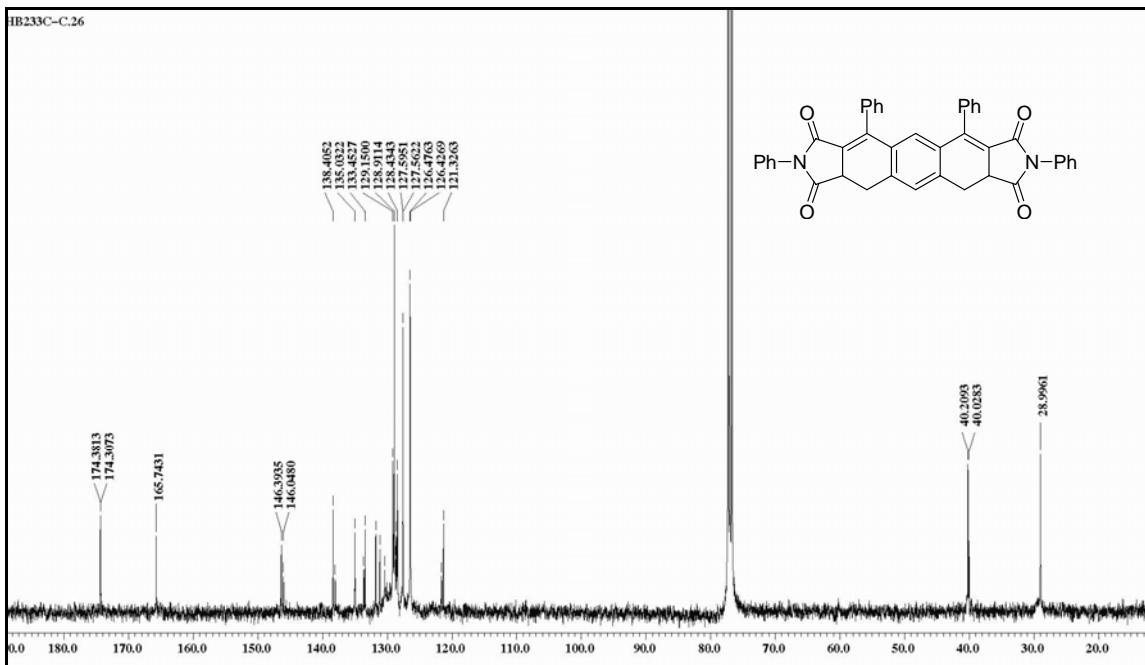


Figure S63. ¹³C NMR spectrum of 4-DCA.

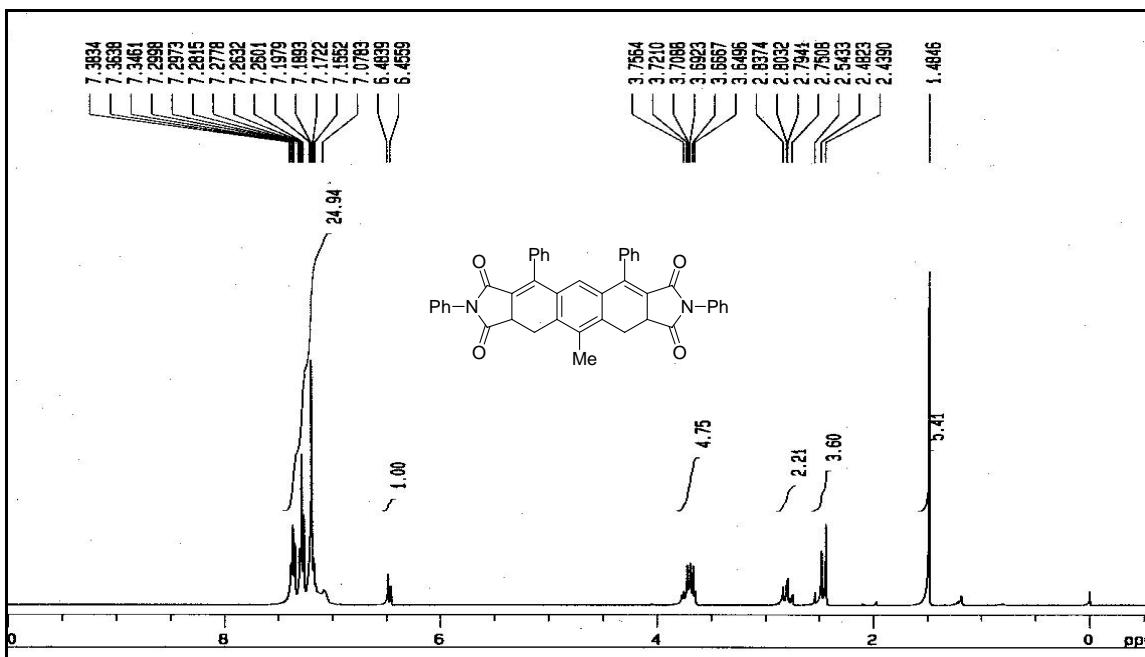


Figure S64. ¹H NMR spectrum of 6-DCA.

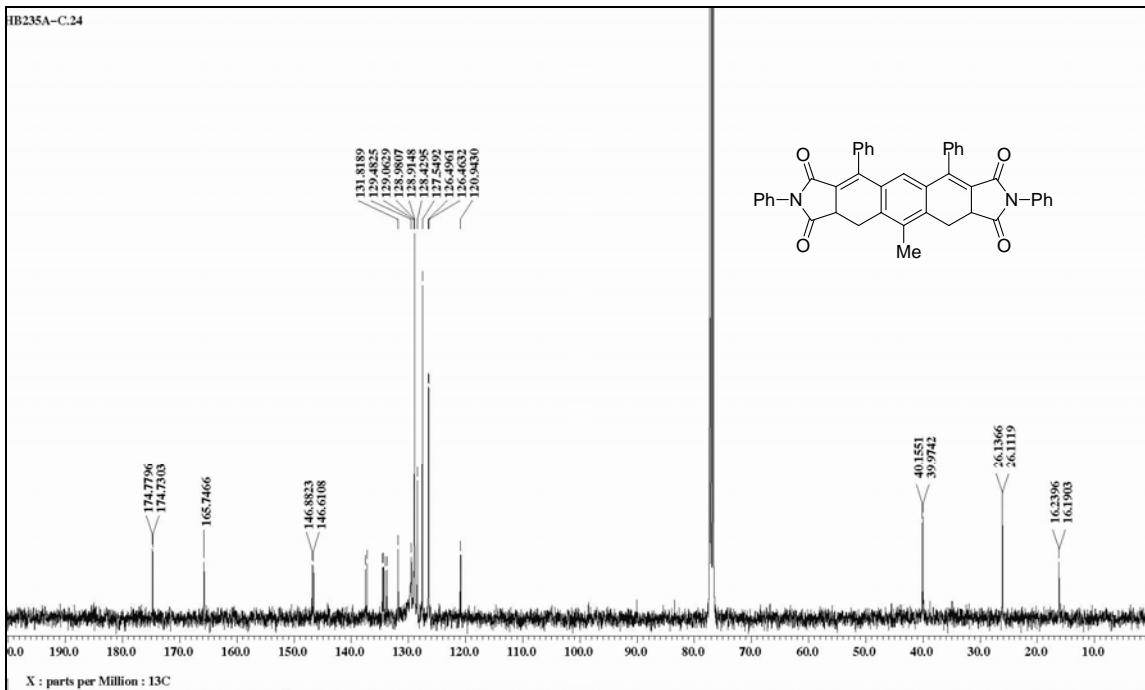


Figure S65. ¹³C NMR spectrum of 6-DCA.

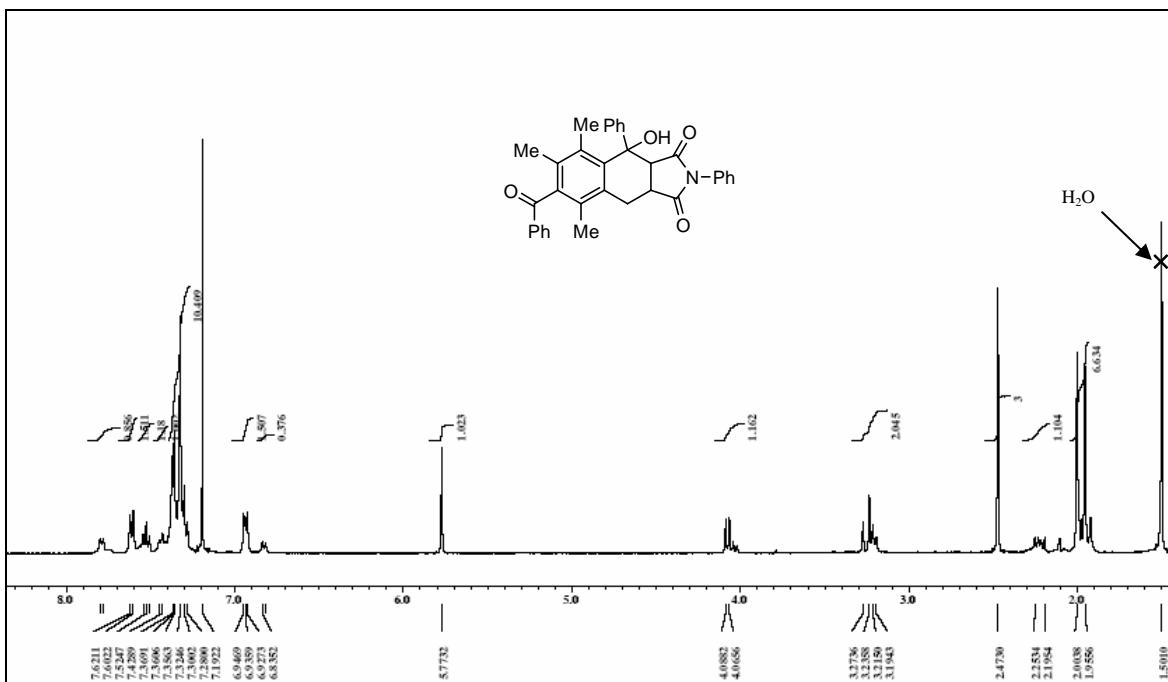


Figure S66. ¹H NMR spectrum of **1a-DCA**.

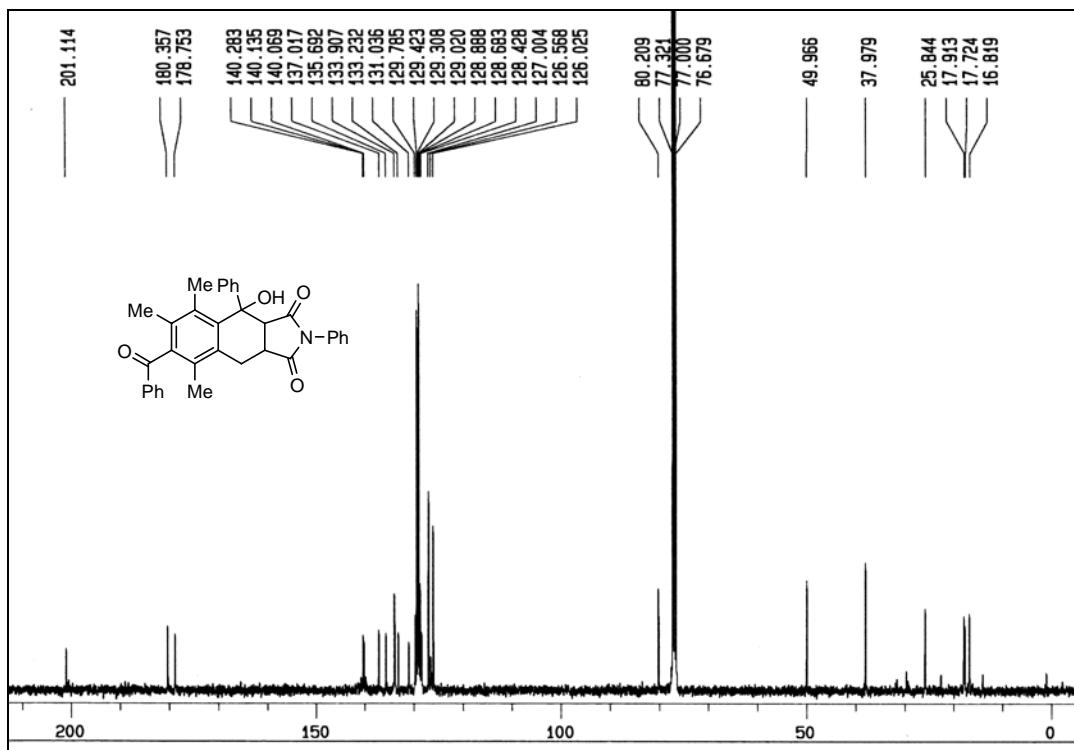


Figure S67. ¹³C NMR spectrum of **1a-DCA**.