

מרחק ארבע

1. Vogel, A.I., A Textbook of Practical Organic Chemistry, 627-629, 657-686, 1230-1235 pp., Longman group Ltd., London, 4th ed., 1978.
2. Knapp, D.R., Handbook of Analytical Derivatization Reactions, 60-61, 92-93, John Wiley & Sons Inc. New York, 1979
3. Henichart, J.P., J.L. Bernier, C. Vaccher, R. Houssin, V. Warin and F. Baert, "Acces aux dinitro-2,4 diarylamines par substitution nucleophile S_{Ar}- limites de la reaction et Application a la synthese de Cyanocarbazoles," Tetrahedron, 36, 3535-3541, 1980.
4. Rosevear, J., and John F.K. Wilshire, "The Preparation of Some 2-nitroacridines and Related Compounds," Aust. J. Chem., 34, 839-53, 1981.
5. Warshawsky, A., and N. Shoef, "Reversible Protection of Oligomeric Ethylene Glycols by Bis (2,4-dinitrophenylation) and Basic Ethanolysis," J. Polym. Sci., 22, 657-667, 1984.
6. _____, Catalog Handbook of fine chemicals, Aldrich Chemical Co., 483-84, 1984.
7. Asquith, R.S., and B. Campbell, "Relationship between Chemical - Structure and Fastness to Light and Gas Fumes of Nitrodi-phenylamine Dyes," J. Soc. Dyers Colour., 79, 678-685, 1963.
8. Asquith, R.S., I. Bridgeman and A.T. Peters, "Fading of Nitrodi-phenylamine Dyes in Relation to Their Structure and Ultra-violet Absorption Spectra," J. Soc. Dyers Colour., 81, 439-441, 1965.

9. Asquith, R.S., A.T. Peters and F. Wallace, "The Fading of Nitro-diphenylamine Disperse Dyes in Relation to Their Structure and Ultraviolet Absorption Spectra," J. Soc. Dyers Colour., 84, 507-510, 1968.
10. Conzalez, G., and E. Clavijo, "Solvent Effects on The Infrared Spectra of Nitro-N-methylanilines : Intra- and Inter-molecular Interactions and Molecular Configurations," J. Chem. Soc. Perkin Trans. II, 1751-8, 1985.
11. Gale, D.J., and J.F.K. Wilshire, "Intramolecular Hydrogen Bonding in Some Ortho-nitrodiphenylamines and Related Compounds. A Proton Magnetic Resonance Study," Aust. J. Chem., 25, 2145-54, 1972.
12. Plieth, K., and Ruban, G., "X-ray Diffraction Crystal Structure Analysis of p,p'-dichlorodiphenylamine," Z.kristallogr. Kristallgeom, 116, 161, 1961. (Chem. Abstr., 57, 173d, 1962.)
13. Grison, E., "Crystal Structure of The 3 Polymorphous Varieties of N-Picryl-p-iodo-aniline", Acta crystallogr., 2, 410, 1949 (Chem. Abstr., 44, 3331a, 1950.)
14. Touissant, J., "The Crystal Structure of Bis(p-bromophenyl) ether," Bull. Soc. roy. Sci. Liège., 15, 86-93, 1946. (Chem. Abstr., 42, 7128c, 1948.)
15. Touissant. J., " Crystallographic Investigations on The Aromatic Sulfides (II) ", Bull. Soc. Chim. Belg., 54, 319, 1945. (Chem. Abstr., 42, 7127i, 1948.)
16. Wilshire, J.F.K., "Intramolecular Hydrogen Bonding in Some Ortho - Substituted N-Methyl-, N-Benzyl- and N-Aryl-4-nitro-anilines:a Proton Magnetic Resonance Study", Aust. J. Chem., 35, 2497-504, 1982.

17. Chandler, W.D., W. MacFarlane Smith, and R.Y. Moir, "The Principal Conformations of Some Ortho-substituted Diphenyl Ethers", Can. J. Chem., 42, 2549-2559, 1964.
18. Montaudo, G., P. Finocchiaro, E. Trivellone, F. Bottino and P. Maravigna, "Conformational Preference of Ortho-Substituted Diphenyl Ethers and Diphenyl Thioethers," Tetrahedron, 27, 2125-2131, 1971.
19. Agahigian, H., and G.D. Vickers, "The Magnetic Anisotropy of The Aromatic Ring, Aryl Thioethers and Sulfones," J. Org. chem., 27, 3324-3325, 1962.
20. Lehmann F., P.A. "Conformations of Highly Hindered Aryl Ethers - XVIII Neighboring-ring Anisotropy Effects in Poly (2,4 - dinitrophenoxy) benzenes," Tetrahedron, 30, 719-726, 1974
21. Bergman, J.J., and W.D. Chandler, "A study of Barriers to Rotation in Some Highly Substituted Diphenyl Ethers," Can. J. Chem., 50, 353-363, 1971.
22. Buchanan, G.W., G. Montaudo and P. Finoccharo, "Carbon-13 Nuclear Magnetic Resonance Studies of Ortho-Substituted Anisoles and Diphenyl Ethers," Can. J. Chem., 52, 767-774, 1974.
23. Silvestein, R.M., G.C. Bassler and T.C. Morrill, Spectrometric Identification of Organic Compounds, 265-266, John Wiley and Sons Inc. New York, 4th ed., 1981.
24. Chang. C., "Carbon-13 Proton Long-Range Couplings of Phenols : Hydrogen Bonding and Stereospecificity," J. Org. Chem., 41, 1881-1883, 1976.
25. Chang. C., H.G. Floss and W. Steck, "Carbon-13 Magnetic Resonance Spectroscopy of Coumarins : Carbon-13-Proton Long-Range Couplings," J. Org. Chem., 42, 1337-1339, 1977.

26. Cussans, N.J., and T.N. Huckerby, "Carbon-13 NMR spectroscopy of Heterocyclic Compounds II-IV," Tetrahedron, 31, 2587, 2591, 2719, 1975.
27. (a) Kingsbury, C.A., and J.H. Looker, "Carbon-13 Spectra of Methoxyflavones," J. Org. Chem., 40, 1120-1124, 1975.
- (b) Pelter, A., R.S. Ward, and T.I. Gray, "The Carbon-13 Nuclear Magnetic Resonance Spectra of Flavanoids and Related Compounds," J. Chem. Soc., Perkin Trans. I, 2475, 1976.
- (c) Wehrli, F.W., "Proton-coupled C-13 Nuclear Magnetic Resonance Spectra Involving ^{13}C - ^1H Spin-spin Coupling to Hydroxyl Protons a Complementary Assignment Aid," J. Chem. Soc., Chem. Commun., 663, 1975.
28. O'Brien, D.H., and Robert D. Stipanovic, "Carbon-13 Magnetic Resonance of Cotton Terpenoids : Carbon-Proton Long Range Couplings," J. Org. Chem., 43, No.6, 1105-1111, 1978.
29. Plantenga, T.M., and C. Maclean, "The Determination of The Dipole Moment Orientation in 1-Chloro-2,4-Dinitrobenzenc by ^{13}C NMR," Chem. Phys. Lett., 75, 294-297, 1980.
30. McCleallan, A.L., Tables of Experimental Dipole Moments, Freeman, San Franicsco, 1963.
31. วิไลลักษณ์ คัมคิเสวี, "การศึกษาสารประกอบอีเธอร์ที่เป็นอนุพันธ์ของแนพทาลีน," วิทยานิพนธ์ปริญญามหาบัณฑิต ภาควิชาเคมี บัณฑิตวิทยาลัย จุฬาลงกรณ์มหาวิทยาลัย, 2525.
32. Ungaro, R., B. El Haj and J. Smid, "Substituent Effects on Stability of Cation Complexes of 4'-Substituted Monobenzo Crown ethers," J.A.C.S., 98, 5198-5202, 1976.

33. (a) _____.Beilsteins Handbuch der Organischen Chemie, 6, 255, 1938.
- (b) Ibid, 12, 751-787, 1224, 1277, 1938.
34. Raiford, L.C., and J.C.Colbert, "The Effect of Substituents in The Formation and Reactions of Certain Ethers," J.A.C.S., 48, 2652-2662, 1926.
35. _____.Sadtler Standard ¹³C NMR spectra,Sadtler Research Laboratories Inc., p1483 & 1729, 1976.
36. Wehrli, F.W., and T. Wirthlin, Interpretation of Carbon-13 NMR Spectra, 49, Heyden & Son Ltd., London, 1978.
37. Abraham, R.J.,and P. Lottus, Proton and Carbon-13 NMR Spectroscopy, 135, Heyden & Son Ltd., London, 1978.

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ประวัติผู้เขียน

นางสาววนิดา จินศาสตร์ เกิดเมื่อวันที่ 18 กุมภาพันธ์ พ.ศ. 2503 ที่กรุงเทพมหานคร ได้รับปริญญาวิทยาศาสตรบัณฑิต สาขาเคมี จากคณะวิทยาศาสตร์ มหาวิทยาลัยเกษตรศาสตร์ เมื่อปีการศึกษา 2524 - 2525 เข้ารับการศึกษาในระดับปริญญาโท สาขาอินทรีย์เคมี ภาควิชาเคมี คณะวิทยาศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย เมื่อปีการศึกษา 2527-2528 ปัจจุบันรับราชการในตำแหน่ง นักวิทยาศาสตร์ ระดับ 4 ประจำศูนย์เครื่องมือวิจัยวิทยาศาสตร์และเทคโนโลยี จุฬาลงกรณ์มหาวิทยาลัย โดยมีหน้าที่ดูแลและใช้เครื่องมือวิเคราะห์ FT-NMR SPECTROMETER JFX 90Q และ XFR SPECTROMETER JSX-60PA

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