

## قائمة المراجع

### List of References

1. M. Irie , Photochromism. , Chemical Reviews , **100** , 1683-1683 , (2000) .
2. E. Bamberger , E.W. Wheelwright , Chem. Ber. , **25** , 3201 , (1892) .
3. H. Von Pechmann , Chem. Ber. , **25** , 3175 , (1892) .
4. C. J. Van Noordem , J. Hist. Cytochem. , **37**, 1315 , (1989) .
5. G. Burns , C. Cunningham and V. McKee , J. Chem. Soc. Perkin Trans. , **II** , 1275 , (1988) .
6. I. Hunter , C. Roberts , J. Chem. Soc. , **9** , 820 , (1941) .
7. J. Lewis and C. Sandorfy , Can. J. Chem. , **61** , 809 , (1983) .
8. G. McConnachie and F. Neuqebauer, Tetrahedron , **31** , 555 , (1975) .
9. A. Katrizky , S. Belyakov , D. Cheng and H. Durst , Synthesis , **5** , 577 , (1995) .
10. Y. Ibrahim , A. Abbas and A. Elewahy , J. Heterocyclic Chem. , **41** , 135-149 , (2004) .
11. G. Christain , Lithium , **3** , 181 , (1990) .
12. A. Attiyat , Y. Ibrahim and G. Christain , Microchem. J. , **37**, 122 , (1988) .
13. J. Plumb , R. Milray and S. Kaye , Cancer Research **49**, 4435-40, (1989) .
14. H. Wan, R. Williams, P. Docherty and D. Williams, J. Science Materials in medicine , **5** , 154-9 , (1994) .
15. A. Mattson, C. Jensen and R. Dutcher , Science , **5** , 294-5 , (1947).

16. T. Habibe and O. Nesimi , Dyes and Pigments , **56** , 159-166 , (2003) .
17. R. Wood , Science , **112** , 86 , (1950) .
18. Y. Zolotov , N. Nizeva , P. Iono , V. Dziomko , V. Ostrovskaya and I. D'yakonova , U.S.S.R. Patent , **1** , 200 , (1983) .
19. N. Niz'eva , V. Ionov , V. Pletnev , I. Pletnev , D. Kumina , V. Ostrovskaya , I. D'yakonova and Y. Zolotov , Dokl. Akad. Nauk SSSR , **274** , 611 , (1984) .
20. Y. Zolotov , V. Ionov , A. Bodnyav , N. Niz'eva , G. Vlasova and E. Rybakova , Zr. Anal. Khim. , **37** , 1543 , (1982) .
21. R. Sitnikova and A. Krylova , Zr. Anal. Khim. , **37** , 611 , (1982) .
22. B. Barssoum , S. Khella , A. Elewahy , A. Abbas and Y. Ibrahim , Talanta , **47** , 1215-22 , (1998) .
23. Katritzky AR , Belyakov SA , Cheng D , Durst HD . Synthesis 1995 , **5** , 577-81 .
24. H. Tezcan and E. Uzluk , DYEs and Pigments , 1-8 , (2006) .
25. H. Tezcan and T. Uyar , Turkish J. Spect Aegean University , **9** , 8-19 , (1988) .
26. H. Liu , Y. Liu and M. Liu , Chen , C. ,Xi , F. Tetrahedron Lett. , **42** , 7083-7086 , (2001) .
27. A. Elewahy and A. Abbas , Tetrahedron Lett. , **47** , 1303-6 , (2006) .
28. Y. Ryabokobylko , V. Ostrovskaya , I. D'yakonova , M. Filatova , L. Shmelev , A. Kessenikh and L. Fomina , Zh. Org. Chem. , **25** , 1759 , (1989) .
29. G. Burns and C. Cunningham , J. Chem. Soc. Perkin Trans , **11** , (1988) .
30. C. Cunningham and G. Burns , J. Chem. Soc. Perkin Trans , **11** , (1989) .

31. Y. Gok and M. Tufekci , Synthesis and Reactivity in Inorganic and Metal-Organic Chemistry , **23** , 861-73 , (1993) .
32. H. Tezcan and E. Uzluk , Dyes and Pigments , **76** , 733-740 , (2008) .
33. D. Brown , H. Bogge , G. Lipunova , A. Muller , W. Plass and K. Walsh , Inorganica Chimica Acta , **280** , 30-38 , (1998) .
34. H. Tezcan and E. Uzluk , Dyes and Pigments , **77** , 635-645 , (2008) .
35. H. Tezcan , E. Uzluk and M. Aksu , Spectrochimica Acta Part A , **70** , 973-982 , (2008) .
36. G. Bai , J. Li , D. Li , C. Dong , X. Han and P. Lin , J. Dyes and Pigments , **11** , (2006) .
37. H. Tezcan and N. Tokay , spectrochimica Acta Part A , **75** , 54-60, (2010) .
38. G. Bai , J. Li , D. Li , C. Dong , X. Han and P. Lin , J. Dyes and Pigments , **11** , (2006) .
39. J. Pople , D. Beveridge and P. Dobosh , J. Chem. Phys. , **47** , 2026, (1967) .
40. G. Segal and J. Pople , J. Chem. Phys. , 3289 , (1966) .
41. M. Dewar and C. Renolds , J. Comp. Chem. , **2** , 140 , (1986) .
42. J. Stewart , J. Comp. Chem. , **10** , 22 , (1989) .
43. J. Collins , P. Schleyer , J. Binkely and J. Pople "Self-Consistent Molecular Orbital Methods , 17 , Geometries and binding energies of second-row molecules . Comparison of three basis sets" , J. Chem. Phys. , **64** , 5142 , (1976) .
44. R. Ditchfiled , W. Here and J. Pople , J. Chem. Phys. , **54** , 724 , (1971) .
45. W. Here , R. Dichfiled and J. Pople , J. Chem. Phys. , **56** , 2257 , (1972) .

46. P. Hariharan and J. Pople , J. Mol. Phys. , **27** , 209 , (1974) .
47. M. Gordon , J. Chem. Phys. , Lett. , **76** , 163 , (1980) .
48. C.Moller and M.Plesset , phys. Rev. , **46** , 618 , (1934) .
49. J. McIver and A. Komorniki , Chem. Phys. Lett. , **10** , 303 , (1971).
50. E. Baerend , D. Ellis and P. Ros , chem. Phys. , **2** , 41 , (1973) .
51. A. Rosen and D. Ellis , J. Chem. Phys. , **65** , 3629 , (1976) .
52. F. Averill and D. Ellis , J. Chem. Phys. , **59** , 6412 , (1973) .
53. B. Delley and D. Ellis , J. Chem. Phys. , **76** , 1949 , (1982) .
54. B. Delley , J. Chem. Phys. , **92** , 508 , (1990) .
55. R. Car and M. Parrinello , Phys. Rev. , Lett. , **55** , 2471 , (1985) .
56. M. Teter , M. Payne and D. Allan , Phys. Rev. , **B40** , 12255 , (1989) .
57. J. Slater , Phys. Rev. , **51** , 846 , (1937) .
58. O. Andersen , Phys. Rev. , **B12** , 3060 , (1975) .
59. E. Wimmer , H. Krakauer , M. Weinert and A. Freeman , Phys. Rev. , **B24** , 864 , (1981) .
60. P. Hohenberg and W. Kohn , Phys. Rev. , **B136** , 864 , (1964) .
61. W. Kohn and L. Sham , Phys. Rev. , **A140** , 1133 , (1965) .
62. M. Levy , Proc. Natl. Acad. Sci. , (USA) **76** , 6062 , (1979) .
63. R. Parr and W. Yang , "Density-Functional Theory of Atoms and Molecules" (Oxford University , New York , 1989) .
64. H. Sambe and R. Felton , J. Chem. Phys. , **62** , 1122 , (1975) .

65. W. Hehre , L. Radom , P. Schleyer and J. Pople , "Ab initio Molecular Orbital Theory" (Willy , New York , 1986) .
66. B. Dunlap , J. Connolly and J. Sabin , J. Chem. Phys. , **71** , 3396 , (1979) .
67. L. Bartolotti , Reviews in Computational Chemistry , ed. B.D. Lipkowitz KB. (1996) , new york , VCH Publishers .
68. R. Parr and T. Weitao , Density Functional Theory of Atoms and Molecular , (1989) , new york , Oxford University Press .
69. J. Pople and R. Nesbet , J. Chem. Phys. , **22** , 571 , (1954) .
70. C. Moller and M. Plesset , Phys. Rev. , **46** , 618 , (1934) .
71. M. Frish et. al , Gaussian 2003.2004 , Gaussian , Inc. , Wallingford CT .
72. M. Schmidt , K. Baldring , J. Boatz , S. Elbert , M. Gordon , J. Jensen , S. Koseki , N. Matsunaga , K. Nguyen , S. Su , T. Windus , M. Dupuis and J. Montgomery , J. Comput. , **14** , 1347 , (1993) .
73. C. Peng , P. Ayala , H. Schlegel and M. Frisch , "Using redundant internal coordinates to optimize geometries and transition states" , J. Comp. Chem. , (1995) .
74. S. Miertus and J. Tomasi , Chem. Phys. , **65** , 239 , (1982) .
75. S. Miertus , E. Scrocco and J. Tomasi , Chem. Phys. , **55** , 117 , (1981) .
76. R. Cammi and J. Tomasi , J. Comput. Chem. , **16** , 1449 , (1995) .
77. M. Burnett and C. John , ORTEP-III : Oak Ridge Thermal Ellipsoid Plot Program for Crystal Structure Illustrations , Oak Ridge National Laboratory Report ORNL-6895 , (1996) .
78. V. Ostrovskaya , I.D'yakonova , R. Poponava , N. Kozolova , Y. Ryabokoblako and M. Filatova , Zh. Org. Khim. , **25** , 1753 , (1989) .