

Dr. S. H. Mashraqui

Designation :

Professor of Chemistry

Qualifications :

<u>Degree</u>	<u>Year of passing</u>	<u>Institution/University</u>
M.Sc.	1973	University of Udaipur, Rajasthan
Ph.D.	1978	I.I.T. Bombay, India
Research executive	1980-82	Hoechst Research Centre, Mumbai, India
Post Doc fellow	1980-82	Brandies University, U.S.A
Research Supervisor :		Profesor P. M. Keehn
Research Associate	1982-85	Groningen University, Holland
Research Supervisor :		Professor R. M. Kellogg

Academic positions:

Associate Professor	1985-1999	Mumbay University, India
Professor of Chemistry	1999- onwards	Mumbay University, India
Visiting Professor :	(May-June, 2003)	University of Claude Benard, Lyon, France

Specialization and Research interest :

- i) Development of novel conjugated chromophores with potential nonlinear optics properties.
- ii) Synthesis and structural studies in novel heterophanes and macrocyclic systems for charge transfer interaction and metal sensing applications.

Research Students guided:

- i) M.Sc by Research - 8
- ii) M.Phil- 1
- iii) Ph.D- 11

Research publications : Total 66

a) Published :	64
b) Papers accepted/ in press :	2
c) In conferences :	1

Research Project:

3 projects from CSIR and BRNS

Publications.

1. **New PCT probes featuring N-phenylmonoaza-18-crown-6 and aryl/pyridyloxadiazoles : optical spectral studies of solvent effects and selected metal ions.** Incl. Phenom. Mol. Recog. 2008, in press
2. **Oxa-bridged Cyclophanes featuring Thieno[2,3-b]thiophene and C₂-symmetric Binol or Binaphthol rings : Synthesis, Structures and Conformational studies.** Tetrahedron , 2008 in press.
3. **Phenothiazile-pyridyl chalcone: an easily accessible colorimetric and fluoremetric 'on-off' dual sensing probe for Cu²⁺,** Tetrahedron Letters, 2008, 49, 3739-3743.
4. **A new intramolecular charge transfer receptor as a selective ratiometric 'off-on' sensor for Zn²⁺.** Tetrahedron Letters (2007), 48(48), 8487-8490.
5. **Zn²⁺ selective luminescent 'off-on' probes derived from diaryl oxadiazole and aza-15-crown-5.** Tetrahedron (2007), 63(45), 11093-11100.
6. **Optically transparent and thermally stable nonlinear optic chromophores featuring a thieno[2,3-b]thiophene donor.** Tetrahedron (2007), 63(40), 10011-10017.
7. **Novel fluoroionophores incorporating diaryl-1,3,4-oxadiazole and aza-crown ring. Potentially sensitive Mg²⁺ ion sensor.** Sensors and Actuators, B: Chemical (2007), B122(2), 347-350
8. **New ICT probes: synthesis and photophysical studies of N-phenylaza-15-crown-5 aryl/heteroaryl oxadiazoles under acidic condition and in the presence of selected metal ions** Tetrahedron (2007), 63(7), 1680-1688
9. **Palladium-catalyzed C-H arylation of thieno[2,3-b]thiophene: an approach to novel 2,5-diaryl/heteroaryl thieno[2,3-b]thiophenes.** Synlett (2006), (15), 2423-2426
10. **π -Aryl/heteroaryl conjugated coumarin-thiazoles: synthesis, optical spectral and nonlinear optic properties.** Journal of Heterocyclic Chemistry (2006), 43(4), 917-923.
11. **Benzimidazole-chalcone: a selective intramolecular charge-transfer probe for biologically important zinc ions.** Chemistry Letters (2006), 35(7), 786-787.
12. **Synthesis and structures of thieno[2,3-b]thiophene incorporated [3.3]dithiacyclophanes. Enhanced first hyperpolarizability in an unsymmetrically polarized cyclophane** Tetrahedron Letters (2006), 47(31), 5599-5602.
13. **Synthesis, optical spectral studies of photoemissive benzopyranone crown ether and its application for metal ion extraction.** Indian Journal of Chemistry, Section B: (2006), 45B(5),

1269-1273.

14. Aza-crown ether tethered with benzothiazole: synthesis and optical spectral studies.

Indian Journal of Chemistry, Section B: (2006), 45B(3), 815-819

15. Condensation of reactive phenols with aromatic 1,2-diketones: A single step protocol for synthesis of benzo-fused γ -lactones. Indian Journal of Chemistry, Section B (2005), 44B(12), 2545-2549.

16. Synthesis and 1H-NMR structural analysis of 11-aryl/heteroarylnaphtho[2,1-b]furans: X-ray crystal structure of 11-(4'-pyridyl)naphtho[2,1-b]furan. Journal of Heterocyclic Chemistry (2005), 42(5), 947-954.

17. Synthesis and structural study of 3-anisyl-4-(4'-pyridyl(pyridinium)thieno[2,3-b]thienophenes. Indian Journal of Chemistry, Section B: (2005), 44B(1), 115-120.

Bibliographic Information

18. Fluorescence properties of crown ethers with phenylbenzothiazole pendant group. Chemical Physics Letters (2005), 408(4-6), 290-294.

19.. Dipyridyl/pyridinium thieno[2,3-b]thiophenes as new atropisomeric systems. Synthesis, conformational analysis and energy minimization. Tetrahedron (2005), 61(14), 3507-3513.

20. Synthesis and nonlinear optical properties of some donor-acceptor oxadiazoles. Opt. Mater. (2004), 27(2), 257-260.

21. 3,6-Dibenzoxy-1,2-pyridazine: A new versatile benzoyl transferring agent for NH₂, -OH and -SH benzoylations. Indian Journal of Chemistry, Section B: (2004), 43B(5), 927-935.

22. Efficient synthesis of 3-substituted coumarins. Mashraqui, Sabir H.; Vashi, Dhaval; Mistry, Hitesh D. Synthetic Communications (2004), 34(17), 3129-3134.

23. A three-component reaction of phenol, aldehyde, and active methylene substrate under Lewis acid catalysis: Successful trapping of o-quinone methide to afford benzopyran systems Chemistry Letters (2004), 33(8), 1058-1059

24. Synthesis, molecular structure and optical spectral studies of syn-dithia benzothiazolophane and anti-bis-lactone benzothiazolophane. Journal of Molecular Structure (2004), 697(1-3), 221-230.

25. Synthesis, Cation-Binding and Optical Spectral Studies of Photoemissive Benzothiazole Crown Ethers. Journal of Inclusion Phenomena and Macrocyclic Chemistry (2004), 48(3-4), 125-130.

26. Donor-acceptor thieno[2,3-b]thiophene systems: Synthesis and structural study of 3-anisyl-4-pyridyl(pyridinium) thieno[2,3-b]thiophenes Journal of Molecular Structure (2004), 689(1-2), 107-113.

27. Attempt towards [2.2](2,4) anti-thiazolophane: Synthesis and conformational analysis of the key intermediate bislactone-bridged thiazolophane. Indian Journal of Chemistry, Section B: (2004), 43B(1), 127-131.

28. New application of 1,4-dihydropyridine system: Michael reactions mediated by 1,4-dihydropyridine-enolate adduct in micellar medium. Chemistry Letters (2003), 32(11), 1064-1065.

29. Synthesis of anti-[2.2](2-phenylthiazolophane): A new heterocyclic biphenylophane. Journal of Chemical Research, Synopses (2003), (6), 351-353

- 30. Synthesis and conformational analysis of syn-dithia[3.3][2,4]thiazolophane and syn-dithia[3.3]([1,4]phenyl[2,4]thiazolophane).** Journal of Chemical Research, Synopses (2003), (4), 225-227.
- 31. An expeditious and convenient one pot synthesis of 2,5-disubstituted-1,3,4-oxadiazoles.** Synthetic Communications (2003), 33(14), 2541-2545.
- 32. Acyl maleic hydrazides as versatile acyl transferring agents.** Journal of Chemical Research, Synopses (2003), (3), 121-123.
- 33. Aqueous micellar medium in organic synthesis: alkylations and Michael reactions of benzotriazole.** Bulletin of the Chemical Society of Japan (2001), 74(11), 2133-2138.
- 34. Attempt towards syn-benzothiazolophane: synthesis and conformational study of syn-dithia[3.3](2,6) benzothiazolophane.** Heterocyclic Communications (2001), 7(1), 73-78
- 35. Synthesis of macrocycles derived from vanillin and isovanillin.** Indian Journal of Chemistry, Section B: (2001), 40B(1), 5-10.
- 36. Synthesis of 3,4-bis (4'-methylphenyl) thieno [2,3-b]thiophene: first example of peri-diaryl thienothiophene** Synthetic Communications (2000), 30(10), 1695-1701
- 37. Synthesis of anti-[2.2](2,6)benzothiazolophane via 10π - 10π coupling protocol.** Mashraqui, Sabir H.; Biswas, Maloyesh M. Indian Journal of Chemistry, Section B:), 38B(8), 959-961
- 38. A convenient one-pot synthesis of 2,5-functionalized thieno[2,3-b]thiophenes using anhydrous potassium fluoride in dimethylformamide.** Synthesis (1999), (12), 2030-2032.
- 39. Application of commercially available anhydrous potassium fluoride for a convenient synthesis of ketene dithioacetals.** Journal of Chemical Research, Synopses (1999), (8), 492-493
- 40. Catalytic oxidation of Hantzsch 1,4-dihydropyridines by RuCl_3 under oxygen atmosphere.** Tetrahedron Letters (1998), 39(27), 4895-4898.
- 41. Synthesis of crown analogs derived from bisnaphthol** Indian Journal of Chemistry, Section B: (1998), 37B(4), 348-351.
- 42. Bismuth nitrate pentahydrate. A convenient reagent for the oxidation of Hantzsch 1,4-dihydropyridines.** Synthesis (1998), (5), 713-714.
- 43. $\text{Bi}(\text{NO}_3)_3 \cdot 5\text{H}_2\text{O}$: a convenient reagent for selective oxidation of sulfides to sulfoxides.** Synthetic Communications (1998), 28(6), 939-943.
- 44. Synthesis of new crown analogs derived from bisphenol.** Indian Journal of Chemistry, Section B: (1997), 36B(8), 656-661.
- 45. Michael reactions in aqueous micelles of cetyltrimethylammonium bromide.** Organic Preparations and Procedures International (1997), 29(5), 584-587.
- 46. 4,4-Dibromo-3-methylpyrazol-5-one: new applications for selective monobromination of phenols and oxidation of sulfides to sulfoxides.** Tetrahedron Letters (1997), 38(27), 4865-4868.
- 47. Synthesis of anti-[2.2](2,6)benzothiazolophane: the first example of [2.2]benzofused heterophane.** Tetrahedron Letters (1997), 38(25), 4487-4488.
- 48. Attempts towards benzothiazolophanes: synthesis and Hofmann pyrolysis of N-(6-methyl-2-benzothiazolylmethyl)-N,N,N-trimethylammonium hydroxide - products characterization and mechanism.** Indian Journal of Chemistry, Section B: (1996), 35B(10), 1031-1037.

- 49. Condensation of thioamides with 2-aminothiophenols: a versatile synthesis of benzothiazoles.** Synthetic Communications (1996), 26(19), 3535-3542.
- 50. N-acylsulfonamides as acyl transferring agents.** Indian Journal of Chemistry, Section B: (1995), 34B(12), 1102-4.
- 51. Synthesis of macrocycles incorporating thioimidate ligands.** Indian Journal of Chemistry, Section B (1995), 34B(1), 12-16.
- 52. Synthesis of sulfides in aqueous micelles of cetyltrimethylammonium bromide.** Journal of Chemical Research, Synopses (1994), (5), 174-5.
- 53. Micelles in organic synthesis: aldol reactions in aqueous micelles of cetyltrimethylammonium bromide.** Journal of Chemical Research, Synopses (1992), (3), 98-9.
- 54. 2,3-Dihydrobenzothiazole as a redox agent: reduction of Schiff bases.** Journal of Chemical Research, Synopses (1991), (4), 96-7.
- 55. Structure of a citral dienamine and p-benzoquinone adduct.** Indian Journal of Chemistry, Section B: (1985), 24B(4), 363-6.
- 56. A ring expansion method for the preparation of 2,3-dihydro-1,4-benzothiazines from 2-aryl-2,3-dihydrobenzothiazoles.** Tetrahedron Letters (1985), 26(11), 1457-60.
- 57. 3-Methyl-2,3-dihydrobenzothiazoles as reducing agents. Dye enhanced photoreactions.** Tetrahedron Letters (1985), 26(11), 1453-6.
- 58. Enantioselective syntheses of aldols and homoallylic alcohols from 1,3-dioxolan-4-ones using mandelic acid as chiral auxiliary.** Journal of Organic Chemistry (1984), 49(13), 2513-16
- 59. Pyridinium salts structurally related to NAD(P)⁺ as enolate transferring agents..** Journal of the American Chemical Society (1983), 105(26), 7792-3.
- 60. Cyclophanes. 16. Synthesis and conformational behavior of 2,11-dithia[3.3](3,5)isoxazoloparacyclophane, 2,11-dithia[3.3](3,5)isoxazolometacyclophane, and [2.2](3,5)isoxazoloparacyclophane.** Journal of Organic Chemistry (1983), 48(8), 1341-4. -
- 61. Active manganese dioxide. Oxidative dehydrogenations** Synthetic Communications (1982), 12(8), 637-45.
- 62. Cyclophanes. 14. Synthesis, structure assignment, and conformational properties of [2.2](2,5)oxazolo- and thiazolophanes.** Journal of the American Chemical Society (1982), 104(16), 4461-5
- 63. Reactions of citral dienamine with electrophilic reagents, p-methoxy- β -nitrostyrene, dimethyl acetylenedicarboxylate and 1,4-naphthaquinone** Indian Journal of Chemistry, Section B: (1978), 16B(12), 1062-4.
- 64. Synthesis of 2,2,4-trimethyl-4-(4'-methylphenyl)butan-4-olide.** Indian Journal of Chemistry, Section B (1979), 17B(1), 71-2.
- 65. Comment on the structure of curcumene ether: synthesis of curcumene ether and its congeners.** Indian Journal of Chemistry, Section B: (1978), 16B(10), 849-52.
- 66. Diels-Alder adducts of pyrrolidine and piperidine enamines of citral with methyl vinyl ketone and acrylonitrile.** Indian Journal of Chemistry, Section B (1977), 15B(4), 305-8.

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