




Title	<b>Prof.</b>	First Name	<b>MARILYN</b>	Last Name	<b>MILTON</b>	Photograph
Designation	Professor					
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Educational Qualifications						
Degree	Institution				Year	
<b>Ph.D. (Chemistry)</b>	Indian Institute of Technology, Delhi				2002	
<b>M.Sc. (Chemistry)</b>	Indian Institute of Technology, Delhi				1997	
<b>B.Sc. (H) Chemistry</b>	Miranda House, University of Delhi				1995	
Career Profile						
<p><b>2013-till date:</b> Professor, Department of Chemistry, University of Delhi.</p> <p><b>2008-2013:</b> Associate Professor, Department of Chemistry, University of Delhi.</p> <p><b>2007-08:</b> Reader, Department of Chemistry, University of Delhi.</p> <p><b>2005-07:</b> Assistant Professor, Department of Chemistry, Indian Institute of Technology, Kharagpur.</p> <p><b>2005:</b> Lecturer (ad-hoc), Miranda House, University of Delhi.</p> <p><b>2004-05:</b> Visiting Researcher, Department of Chemistry, Shiga University of Medical Sciences, Japan.</p> <p><b>2004:</b> Guest Research Associate, Department of Energy and Hydrocarbon Chemistry, Kyoto University, Japan.</p> <p><b>2002-04:</b> Monbukhagakusho Research Fellow, Department of Energy and Hydrocarbon Chemistry, Kyoto University, Japan.</p> <p><b>2002:</b> Project Scientist, Department of Chemistry, Indian Institute of Technology, Delhi</p>						
Administrative Assignments						
<ol style="list-style-type: none"> <li><b>Convener, Admission Committee</b> for M.Sc. (Chemistry) and Ph.D. (Chemistry) admissions (<b>2022-23</b>)</li> <li><b>Provost</b> of International Students' House for Women (<b>2021-22</b>)</li> <li><b>Member of Managing Committee</b> North Eastern Student's House for women (<b>2019</b>)</li> </ol>						

<ol style="list-style-type: none"> <li>4. <b>Coordinator</b> for the Centralized Evaluation Center for the M.Sc. (Chemistry) Examinations of the Department of Chemistry, University of Delhi (<i>May/June 2019</i>)</li> <li>5. <b>Coordinator</b>, DU Pre-Entrance Summer School Programme (<i>2018</i>)</li> <li>6. <b>Convener</b> of Departmental committee to combat Holi hooliganism (<i>March 2017</i>)</li> <li>7. <b>Deputy Superintendent of Examinations</b> for M.Sc. Chemistry (Practical) Exams (<i>Nov-Dec 2016</i>)</li> <li>8. <b>Observer</b>, M.Sc. (Chemistry) Entrance Exam (<i>2015</i>)</li> <li>9. <b>Convener</b>, Organic Section (<i>2014-15</i>)</li> <li>10. <b>Deputy Superintendent of Examinations</b> M.Sc. Chemistry (Theory) Exams (<i>May 2014</i>)</li> <li>11. <b>Secrecy officer</b>, M.Sc. (Chemistry) Entrance Exam (<i>2014</i>)</li> <li>12. <b>Convener</b>, Sexual Harassment Committee of Chemistry Department (<i>2013-14</i>)</li> <li>13. <b>Secrecy officer</b>, M.Sc. (Chemistry) Entrance Exam (<i>2013</i>)</li> <li>14. <b>Member</b>, The Jean and Ashit Ganguly Education Scholarship committee (<i>2013</i>)</li> <li>15. <b>Deputy Superintendent</b> Ph.D. Chemistry Entrance Exam (<i>2010</i>)</li> </ol>
<b>Areas of Interest / Specialization</b>
Design and synthesis of fluorescent sensors; design and synthesis of advanced materials, development of new methodologies for functional group transformations; synthesis of novel heterocyclic compounds and their applications, organocatalysis, transition-metal catalyzed cross-coupling reactions, development of multi-catalyst systems for organic transformations.
<b>Subjects Taught</b>
<p><b>M.Sc. Courses Taught:</b></p> <ol style="list-style-type: none"> <li>1. Organic Stereochemistry</li> <li>2. Spectroscopy</li> <li>3. Photochemistry</li> <li>4. Supramolecular Chemistry and Carbocyclic Rings</li> <li>5. Chemistry of Life Processes</li> </ol> <p><b>M.Tech. CSPT Courses Taught:</b></p> <ol style="list-style-type: none"> <li>1. Supramolecular Chemistry</li> <li>2. Philosophy of Organic Synthesis</li> </ol> <p><b>Pre-Ph.D. Course Taught:</b></p> <ol style="list-style-type: none"> <li>1. Metal-catalyzed cross-coupling reactions</li> </ol>
<b>Research Guidance</b>
<ol style="list-style-type: none"> <li>1. <b>Supervision of awarded Doctoral Thesis</b> <ol style="list-style-type: none"> <li>1) “<i>Design, synthesis and characterization of novel hydrophilic, unsymmetrically N, N-disubstituted benzimidazolium salts and their applications as organocatalysts, ligands in Heck Reaction and fluorescent Probes</i>” <b>Amita (2015)</b></li> </ol> </li> </ol>

- 2) “*Synthesis of Novel Imidazolium Salts and their Applications in Metal-catalyzed C-C Bond Forming Reactions and Development of Novel Synthetic Methodologies for Metal-free C-N Bond Formation*” **Parul Garg (2016)**
- 3) “*Computational Modeling Approaches and Analysis of Ligands Involved in the Biochemical Pathways*” **Nidhi Chadha (2016)** under Co-supervision of Dr. Anjani Kumar Tiwari, INMAS.
- 4) “*Design and synthesis of novel peptidic and non-peptidic SPECT radiopharmaceuticals and MR contrast agents for imaging central nervous system*” **Swarndeeep Kaur Sethi (2016)** under Co-supervision of Dr. Raunak, INMAS.
- 5) “*Design, synthesis and characterization of some novel heterocyclic compounds and their applications*” **Swati Bishnoi (2017)**
- 6) “*Design, synthesis and characterization of some novel azoles and phenothiazine functionalized compounds and their applications*” **Shweta Chaudhary (2018)**
- 7) “*Design, synthesis and characterization of novel phenothiazine derivatives and their potential material and biological applications*” **Tanisha Sachdeva (2021)**
- 8) “*AIEE active novel quinoxaline and pyridopyrazine derivatives and their applications as metal ion and acid sensors*” **Shalu Gupta (2022)**
- 9) “*Synthesis of selected porphyrinoids, metal porphyrinoids, characterization and their application in catalysis and non-covalent interaction*” **Anshu Dandia (2022)** under Co-supervision of Prof. S.M.S. Chauhan
- 10) “*Synthesis and characterization of novel phenothiazine, azaphenothiazine and benzimidazole derivatives and their applications*” **Himshikha Sharma (2023)**

## 2. Supervision of Doctoral Thesis, under progress

- 1) Ms. Monika Lamoria
- 2) Ms. Reshma Kumari
- 3) Ms. Gunjan

## Publications Profile

### Research papers published in Refereed/Peer Reviewed Journals

1. Lamoria, M.; **Milton, M. D.** “*Novel Y-shaped multi-stimuli responsive pyrene substituted quinoxaline and pyridopyrazine-based push-pull molecules showing solvatochromism, aggregation induced excimer emission, acidofluorochromism and moisture detection*” *Dyes and Pigments* **2023 (Accepted)**.
2. Kumari, R.; **Milton, M. D.** “*Multi stimuli responsive non-doped red emitting AIEE active phenothiazine based chalcones: Crystal structure, solvatochromism, turn-on mechanofluorochromism and acidochromism*” *Eur. J. Org. Chem.* **2022**, 2022, e202201024. <https://doi.org/10.1002/ejoc.202201024>
3. Sharma, H.; Chaudhary, S.; Nirwan, S.; Kakkar, R.; Liew, H. S.; Low, M. L.; Mai, C.-W.; Hii, L.-W.; Leong, C.-O.; **Milton, M. D.** “*N, N'-Disubstituted benzimidazolium salts: Synthesis, characterization, micromolar detection of Fe(III) ions in aqueous system,*

biological evaluation and molecular docking studies” *ChemistrySelect* **2022**, 7, e202203239. <https://doi.org/10.1002/slct.202203239>

4. Kumari, R.; **Milton, M. D.** “Design and synthesis of multi-stimuli responsive  $\pi$ -extended phenothiazine aldehydes: Solvatochromism, acidochromism, moisture detection and fluorochromic sensing of amine vapors” *Dyes and Pigments* **2022**, 205, 110474. <https://doi.org/10.1016/j.dyepig.2022.110474>
5. Gupta, S.; **Milton, M. D.** “AIEE-TICT quadrupolar push-pull quinoxaline derivatives displaying solvatochromism, acidofluorochromism and logic gate operation” *J. Molecular Structure* **2022**, 1264, 133275. <https://doi.org/10.1016/j.molstruc.2022.133275>
6. Sharma, H.; Kakkar, R.; Bishnoi, S.; **Milton, M. D.** “Synthesis of acceptor-donor-acceptor based phenothiazine-5-oxide aldehydes displaying large Stokes shift- “on-off-on” acidofluorochromic switch and molecular logic gate operation” *J. Photochem. Photobiol. A* **2022**, 430, 113944. <https://doi.org/10.1016/j.jphotochem.2022.113944>
7. Gupta, S.; **Milton, M. D.** “Novel Y-shaped AIEE-TICT active  $\pi$ -extended quinoxalines-based donor-acceptor molecules displaying acidofluorochromism and temperature dependent emission” *J. Photochem. Photobiol. A* **2022**, 424, 113630. <https://doi.org/10.1016/j.jphotochem.2021.113630>
8. Gupta, S.; **Milton, M. D.** “Y-shaped novel AIEE active push-pull quinoxaline derivatives displaying acidochromism and use towards white light emission by controlled protonation” *Dyes and Pigments* **2021**, 195, 109690. <https://doi.org/10.1016/j.dyepig.2021.109690>
9. Gupta, S.; **Milton, M. D.** “Y-shaped AIEE active quinoxaline-benzothiazole conjugate for fluorimetric sensing of nitroaromatic in aqueous media” *J. Photochem. Photobiol. A* **2021**, 419, 113444. <https://doi.org/10.1016/j.jphotochem.2021.113444>
10. Sachdeva, T.; **Milton, M. D.** “Novel push-pull based phenothiazine-benzothiazole derivatives integrated with molecular logic gate operation for reversible volatile acid detection” *J. Molecular Structure* **2021**, 1243, 130768. <https://doi.org/10.1016/j.molstruc.2021.130768>
11. Sachdeva, T.; **Milton, M. D.** “Fluorescent dyes for moisture detection in organic solvents: Push-pull based phenothiazine aldehydes with large Stokes shifts” *J. Photochem. Photobiol. A* **2020**, 112804. <https://doi.org/10.1016/j.jphotochem.2020.112804>
12. Sachdeva, T.; Gupta, S.; **Milton, M. D.** “Smart Organic Materials with Acidochromic Properties” *Current Organic Chemistry* **2020**, 24, 1976-1998. <https://doi.org/10.2174/1385272824999200729132853>
13. Sachdeva, T.; **Milton, M. D.** “AIEE active novel red-emitting D- $\pi$ -A phenothiazine chalcones displaying large Stokes shift, solvatochromism and “turn-on” reversible

*mechanofluorochromism*” *Dyes and Pigments* **2020**, *181*, 108539.  
<https://doi.org/10.1016/j.dyepig.2020.108539>

14. Chaudhary, S.; Mukherjee, M.; Paul, T. K.; Taraphder, S.; **Milton, M. D.** “*Novel thiazoline-phenothiazine based “push-pull” molecules as fluorescent probes for volatile acids detection*” *J. Photochem. Photobiol. A* **2020**, *397*, 112509.  
<https://doi.org/10.1016/j.jphotochem.2020.112509>
15. Chadha, N.; Singh, D.; **Milton, M. D.**; Mishra, G.; Daniel, J.; Mishra, A. K.; Tiwari, A. K. “*Computational prediction of interaction and pharmacokinetics profile study for polyamino-polycarboxylic ligands on binding with human serum albumin*” *New J. Chem.*, **2020**, *44*, 2907-2918. <https://doi.org/10.1039/C9NJ05594K>
16. Sachdeva, T.; Low, M. L.; Mai, C-W.; Cheong, S. L.; Liew, Y. K.; **Milton, M. D.** “*Design, synthesis and characterisation of novel phenothiazine-based triazolopyridine derivatives: evaluation of anti-breast cancer activity on human breast carcinoma*” *ChemistrySelect* **2019**, *4*, 12701-12707. <https://doi.org/10.1002/slct.201903203>
17. Gupta, S.; **Milton, M. D.** “*Design and synthesis of novel V-shaped AIEE active quinoxalines for acidochromic applications*” *Dyes and Pigments* **2019**, *165*, 474-487.  
<https://doi.org/10.1016/j.dyepig.2019.02.038>
18. Sachdeva, T.; **Milton, M. D.** “*Logic gate based novel phenothiazine-pyridylhydrazones: Halochromism in solid and solution state*” *Dyes and Pigments* **2019**, *164*, 305-318.  
<https://doi.org/10.1016/j.dyepig.2019.01.038>
19. Chaudhary, S.; **Milton, M. D.** “*Dicationic imidazolium salts as fluorescent probes for selective detection of Fe<sup>3+</sup> ion in pure aqueous media*” *J. Photochem. Photobiol. A* **2018**, *356*, 595-602. <https://doi.org/10.1016/j.jphotochem.2018.02.003>
20. Gupta, S.; **Milton, M. D.** “*Synthesis of novel AIEE active pyridopyrazines and their applications as chromogenic and fluorogenic probes for Hg<sup>2+</sup> detection in aqueous media*” *New J. Chem.*, **2018**, *42*, 2838-2849. <https://doi.org/10.1039/c7nj04573e>
21. Chaudhary, S.; Mukherjee, M.; Paul, T. K.; Bishnoi, S.; Taraphder, S.; **Milton, M. D.** “*Novel phenothiazine-5-oxide based push-pull molecules: Synthesis and fine-tuning of electronic, optical and thermal properties*” *ChemistrySelect* **2018**, *3*, 5073-5081.  
<https://doi.org/10.1002/slct.201800131>
22. Chaudhary, S.; Sharma, H.; **Milton, M. D.** “*Novel 2-arylbenzothiazoles: Selective chromogenic and fluorescent probes for the detection of picric acid*” *ChemistrySelect* **2018**, *3*, 4598-4608. <https://doi.org/10.1002/slct.201800645>
23. Sachdeva, T.; Bishnoi, S.; **Milton, M. D.** “*Multi-stimuli response displaying novel phenothiazine-based non-planar D-π-A hydrazones: Synthesis, characterization,*

- photophysical and thermal studies*” *ChemistrySelect* **2017**, *2*, 11307-11313. <https://doi.org/10.1002/slct.201702684>
24. Bishnoi, S.; **Milton, M. D.**; Paul, T. K.; Pal, A. K.; Taraphder, S. “*Small non-planar phenothiazine-5-oxide-based molecules: structural characterization, photophysical, thermal and computational studies*” *ChemistrySelect* **2017**, *2*, 3084-3092. <https://doi.org/10.1002/slct.201700279>
25. Chaudhary, S.; **Milton, M. D.**; Garg, P. “*A base- and metal-free protocol for the synthesis of 2-aryl/heteroaryl thiazolines*” *ChemistrySelect* **2017**, *2*, 650-654. <https://doi.org/10.1002/slct.201601553>
26. Bishnoi, S.; **Milton, M. D.** “*Selective and sensitive novel benzimidazolium-based fluorescent probes for micromolar detection of Fe<sup>3+</sup> ions in pure aqueous media*” *J. Photochem. Photobiol. A* **2017**, *335*, 52-58. (*Invited feature article*) <https://doi.org/10.1016/j.jphotochem.2016.11.010>
27. **Milton, M. D.**; Garg, P. “*Flexible, dicationic imidazolium salts for in situ application in palladium-catalyzed Mizoroki-Heck coupling of acrylates under aerial conditions*” *Applied Organomet. Chem.* **2016**, *30*, 759-766. <https://doi.org/10.1002/aoc.3503>
28. Varshney, R.; Sethi, S.; Rangaswamy, S.; Tiwari, A. K.; **Milton, M. D.**; Kumaran, S.; Mishra, A. K. “*Design, synthesis and relaxation studies of triazole linked gadolinium(III)-DO3A-BTbistriazaspirodecanone as a potential MRI contrast agent*” *New J. Chem.* **2016**, *40*, 5846-5854. <https://doi.org/10.1039/c5nj03220b>
29. Bishnoi, S.; **Milton, M. D.** “*Tunable phenothiazine hydrazones as colour displaying, ratiometric and reversible pH sensors*” *Tetrahedron Lett.* **2015**, *56*, 6633-6638. <https://doi.org/10.1016/j.tetlet.2015.10.041>
30. Chadha, N.; Tiwari, A. K.; Kumar, V.; Lal, S.; **Milton, M. D.**; Mishra, A. K. “*Oxime-dipeptides as anticholinesterase, reactivator of phosphorylated-serine of AChE catalytic triad: probing the mechanistic insight by MM-GBSA, dynamics simulations and DFT analysis*” *Journal of Biomolecular Structure and Dynamics* **2015**, *33*, 978-990. <https://doi.org/10.1080/07391102.2014.921793>
31. Chadha, N.; Tiwari, A. K.; Kumar, V.; **Milton, M. D.**; Mishra, A. K. “*In silico thermodynamics stability change analysis involved in BH<sub>4</sub> responsive mutations in phenylalanine hydroxylase: QM/MM and MD simulations analysis*” *Journal of Biomolecular Structure and Dynamics* **2015**, *33*, 573-583. <https://doi.org/10.1080/07391102.2014.897258>
32. Garg, P.; Chaudhary, S.; **Milton, M. D.** “*Synthesis of 2-aryl/heteroaryloxazolines from nitriles under metal and catalyst-free conditions and evaluation of their antioxidant activities*” *J. Org. Chem.* **2014**, *79*, 8668-8677. <https://doi.org/10.1021/jo501430p>

33. Lal, A. K.; **Milton, M. D.** “Designed benzimidazolium salts: Modulation of fluorescence response towards metal cations in pure aqueous media” *Sensors and Actuators B* **2014**, 202, 257-262. <http://dx.doi.org/10.1016/j.snb.2014.05.037>
34. Lal, A. K.; **Milton, M. D.** “Synthesis of new benzimidazolium salts with tunable emission intensities and their application as fluorescent probes for  $Fe^{3+}$  in pure aqueous media” *Tetrahedron Lett.* **2014**, 55, 1810-1814. <https://dx.doi.org/10.1016/j.tetlet.2014.01.127>
35. Sethi, S.; Varshney, R.; Rangaswamy, S.; Chadha, N.; Hazari, P. P.; Kaul, A.; K.; Chuttani, **Milton, M. D.**; Mishra, A. K. “Design, synthesis and preliminary evaluation of a novel SPECT DTPA-bis-triazaspirodecanone conjugate for d2 receptor imaging” *RSC Adv.* **2014**, 4, 50153-50162. <https://doi.org/10.1039/c4ra07004f>
36. Garg, P.; **Milton, M. D.** “Sodium carbonate mediated regioselective synthesis of novel N-(hydroxyalkyl)cinnamamides”. *Tetrahedron Lett.* **2013**, 54, 7074-7077. <https://dx.doi.org/10.1016/j.tetlet.2013.10.086>
37. Chadha, N.; Tiwari, A. K.; **Milton, M. D.**; Mishra, A. K.; “Perception into hypoxia selectivity and electronic features of symmetrically substituted bithiosemicarbazone ligands and their copper complexes: DFT and QM/MM docking” *Med. Chem. Commun.* **2013**, 4, 542-548. <https://doi.org/10.1039/c2md20333b>
38. Varshney; R.; Sethi, S. K.; Hazari, P. P.; Chuttani, K.; Soni, S.; **Milton, M.D.**; Mishra, A.K. “Synthesis of [DTPA-bis(D-ser)] chelate (DBDSC): An approach for the design of SPECT radiopharmaceuticals based on Technetium” *Curr. Radiopharm.* **2012**, 5, 348-355.
39. Inada, Y.; Yoshikawa, M.; **Milton, M. D.**; Nishibayashi, Y.; Uemura, S. “Ruthenium-catalyzed propargylation of aromatic compounds with propargylic alcohols” *Eur. J. Org. Chem.* **2006**, 4, 881-890. <https://doi.org/10.1002/ejoc.200500858>
40. Kumar, N.; **Milton, M. D.**; Singh, J. D.; Upreti, S.; Butcher, R. J. “Design, synthesis, and structural aspects of chalcogen-substituted pyridinedicarboxamide donors and their reactions” *Tetrahedron Lett.* **2006**, 47, 885-889. <https://doi.org/10.1016/j.tetlet.2005.12.004>
41. Onodera, G.; Matsumoto, H.; **Milton, M. D.**; Nishibayashi, Y.; Uemura, S. “Ruthenium-catalyzed formation of aryl(diphenyl)phosphine oxides by reactions of propargylic alcohols with diphenylphosphine oxide” *Org. Lett.* **2005**, 7, 4029-4032. <https://doi.org/10.1021/ol0515311>
42. Nishibayashi Y.; **Milton, M. D.**; Inada, Y.; Yoshikawa, M.; Wakiji, I.; Hidai, M.; Uemura, S. “Ruthenium-catalyzed propargylic substitution reactions of propargylic alcohols with oxygen-, nitrogen-, and phosphorus-centered nucleophiles” *Chem. Eur. J.* **2005**, 11, 1433-1451. <https://doi.org/10.1002/chem.200400833>

43. **Milton, M. D.**; Khan, S.; Singh, J. D.; Singh, S.; Maheshwari, M.; Mishra, V.; Khandelwal, B. L. "A facile access to chalcogen and dichalcogen bearing dialkylamines and diols" *Tetrahedron Lett.* **2005**, 46, 755-758. <https://doi.org/10.1016/j.tetlet.2004.12.035>
44. **Milton, M. D.**; Inada, Y.; Nishibayashi, Y.; Uemura, S. "Ruthenium and gold catalysed sequential reactions: a straightforward synthesis of substituted oxazoles from propargylic alcohols and amides" *Chem. Commun.* **2004**, 2712-2713. <https://doi.org/10.1039/b411180j>
45. **Milton, M. D.**; Kumar, N.; Sokhi, S. S.; Singh, S.; Maheshwari, M.; Singh, J. D.; Asnani, M.; Butcher, R. J. "Design and synthesis of organochalcogen (Se or Te) based multifunctional derivatives: structural determination and dynamic behavior of 2-chloro-4,6-bis(phenylselenoethyl-amino)-1,3,5-triazines" *Tetrahedron Lett.* **2004**, 45, 8941-8944. <https://doi.org/10.1016/j.tetlet.2004.09.132>
46. **Milton, M. D.**; Onodera, G.; Nishibayashi, Y.; Uemura, S. "Double phosphinylation of propargylic alcohols: a novel synthetic route to 1,2-bis(diphenylphosphino)ethane derivatives" *Org. Lett.* **2004**, 6, 3993-3995. <https://doi.org/10.1021/ol048347k>
47. **Milton, M. D.**; Singh, J. D.; Butcher, R. J. "Synthesis of  $\beta$ -ketoenamine donors having O, N, Se/Te donor functionalities and their reaction chemistry with Pd (II) and Pt (II) metal ions" *Tetrahedron Lett.* **2004**, 45, 6745-6747. <https://doi.org/10.1016/j.tetlet.2004.07.057>
48. Kumar, N.; **Milton, M. D.**; Singh, J. D. "An efficient synthesis and structural aspects of hexakis(arylseleno)benzenes and hexakis(arylselenomethyl)benzenes" *Tetrahedron Lett.* **2004**, 45, 6611-6613. <https://doi.org/10.1016/j.tetlet.2004.07.020>
49. **Milton, M. D.**; Kumar, N.; Sokhi, S. S.; Singh, S.; Singh, J. D. "An efficient and facile one pot synthesis of structurally unique 2, 4, 6- tris(arylchalcogeno)-1,3,5-triazine and 1,3,5-tris(arylchalcogeno)-2,4,6-trimethylbenzene" *Tetrahedron Lett.* **2004**, 45, 6453-6455. <https://doi.org/10.1016/j.tetlet.2004.06.128>
50. Nishibayashi, Y.; Yoshikawa, M.; Inada, Y.; **Milton, M. D.**; Hidai, M.; Uemura, S. "Novel ruthenium- and platinum-catalyzed sequential reactions: Synthesis of tri- and tetrasubstituted furans and pyrroles from propargylic alcohols and ketones" *Angew. Chem.* **2003**, 115, 2785-2788. <https://doi.org/10.1002/ange.200351170>; *Angew. Chem. Int. Ed.* **2003**, 42, 2681-2684. <https://doi.org/10.1002/anie.200351170>
51. **Milton, M. D.**; Singh, J.; Singh, J. D.; Khandelwal, B. L.; Butcher, R. J. "Design, synthesis and structural aspects of  $\text{NH}_2(\text{CH}_2)_n\text{E}(\text{CH}_2)_n\text{NH}_2$  ( $n = 2$  or  $3$ ;  $\text{E} = \text{Se}$  or  $\text{Te}$ )  $\text{N}_2\text{Se}$  or  $\text{N}_2\text{Te}$  donors and its complexes with Group 12 metals" *Phosphorus, Sulfur and Silicon and the Related Elements* **2001**, 172: 239-246. <https://doi.org/10.1080/10426500108046656>



52. **Milton, M. D.**; Singh, J. D.; Khandelwal, B. L.; Kumar, P.; Singh, T. P.; Butcher, R. J. “Design, synthesis and structural aspects of terdentate (N,O,Se/Te) donors and their competitive coordination behavior towards Pt(II)” *Phosphorus, Sulfur and Silicon and the Related Elements* **2001**, 172, 231-238. <https://doi.org/10.1080/10426500108046655>
53. Singh, J. D.; **Milton, M. D.**; Bhalla, G.; Khandelwal, B. L.; Kumar, P.; Singh, T. P.; Butcher, R. J. “Design, synthesis and structural aspects of acyclic N<sub>3</sub>E<sub>2</sub> (E = Se or Te) type donors and its complexes with Group 12 metals” *Phosphorus, Sulfur and Silicon and the Related Elements* **2001**, 172, 223-230. <https://doi.org/10.1080/10426500108046654>
54. **Milton, M. D.**; Singh, J. D.; Butcher, R. J. “Design and synthesis of heteroatom bearing organoselenium donor and its reactivity towards platinum(II) metal” *Phosphorus, Sulfur and Silicon and the Related Elements* **2001**, 169, 153-156. <https://doi.org/10.1080/10426500108546613>
55. Singh, J. D.; **Milton, M. D.**; Khandelwal, B. L.; Karthikeyan, S.; Singh, T. P. New acyclic chalcogen bearing ligands and their complexation reactions. *Phosphorus, Sulfur and Silicon and the Related Elements* **1998**, 136-138: 299-304. <https://doi.org/10.1080/10426509808545955>

#### Patents:

1. Indian Patent no. 301082 Indian Patent no. 301082; *Novel brominated phenothiazine scaffolds and methods thereof*, (February, **2014**)

#### Conference Organization/ Presentations (in the last three years)

1. **M. D. Milton**, S. Gupta, “Y-shaped quinoxalines-based AIEgens: design, synthesis and applications” **Invited Short Lecture** (online) presented in the **International Conference on the Aggregation Induced Emission from fundamental to application** (16<sup>th</sup>-18<sup>th</sup> December, 2022 at BITS Goa) organized by the Department of Chemistry BIITS Pilani and BIITS Pilani KK Birla Goa Campus.
2. **M. Lamoria**, M. D. Milton, “Novel AIEE active quinoxaline and pyridopyrazine derivatives as multi-stimuli responsive materials” **Oral lecture** by Ms. Monika Lamoria presented in the **International Conference on the Aggregation Induced Emission from fundamental to application** (16<sup>th</sup>-18<sup>th</sup> December, 2022 at BITS Goa) organized by the Department of Chemistry BIITS Pilani and BIITS Pilani KK Birla Goa Campus. (*Awarded best oral ACS Materials Award*)
3. **M. D. Milton**, “Multi-stimuli responsive fluorochromic switching in phenothiazine derivatives” **Invited Lecture** presented in the **Young Scientist Conclave** (online) held from **July 30-31, 2022 to celebrate the 161<sup>st</sup> Birth Anniversary of the Acharya Prafulla Chandra Ray**, Organized by The Indian Chemical Society.

<p>4. <b>M. D. Milton</b>, “<i>Smart organic materials</i>” delivered a talk in <b>online Refresher Course on Chemistry for University and College teachers</b> organised by CPDHE on <b>31<sup>st</sup> October 2020</b>.</p> <p>5. <b>S. Gupta</b>, M. D. Milton, “<i>Novel AIEE active pyridopyrazine and quinoxaline derivatives for mercury ion sensing and acidochromic applications</i>” <b>Oral Presentation</b> in the <b>First Virtual JNOST Symposium XVI-J-NOST 31<sup>st</sup> October-1<sup>st</sup> November, 2020</b>.</p>
<p><b>Research Projects (Major Grants/Research Collaboration)</b></p> <ul style="list-style-type: none"> <li>• Principal Investigator of Minor Project Funded by Institute of Eminence, University of Delhi under Faculty Research Programme, 2021-22</li> <li>• Principal Investigator of Minor Project Funded by Institute of Eminence, University of Delhi under Faculty Research Programme, 2021-22</li> <li>• Principal Investigator of Minor Project Funded by Institute of Eminence, University of Delhi under Faculty Research Programme, 2020-21</li> <li>• Principal Investigator of Project Titled “<i>Synthesis of novel water-soluble fluorescent probes for metal ions and anions in aqueous medium</i>” Funded by University of Delhi, 2015-16.</li> <li>• Principal Investigator of Project Titled “<i>Synthesis of novel 2-aryloxazolines and study of their antioxidant activities</i>” Funded by University of Delhi, 2014-15.</li> <li>• Principal Investigator of Project Titled “<i>Design and synthesis of novel, water-soluble functionalized benzimidazole and imidazole compounds and their applications</i>” Funded by University of Delhi, 2013-14.</li> <li>• Principal Investigator of Project Titled “<i>Synthesis of novel N-heterocyclic carbene (NHCs) ligands and their application in C-C bond forming reactions</i>” Funded by University of Delhi, 2012-13.</li> <li>• Principal Investigator of Project Titled “<i>Benzoin Condensation in Aqueous Medium By Novel N-Heterocyclic Carbene (NHCs) Ligands</i>” Funded by University of Delhi, 2011-12.</li> <li>• Principal Investigator of Project Titled “<i>Transition-metal catalyzed C-N bond forming reactions of aryl halides</i>” Funded by University of Delhi, 2010-11.</li> <li>• Principal Investigator of SERC Fast Track Scheme for Young Scientists (DST) Titled “<i>Transition-metal catalyzed activation of C(aryl)-Cl bond and its application in C-N, C-O and C-S bond forming reactions</i>”, 2007-10.</li> </ul>
<p><b>Awards and Distinctions</b></p> <ol style="list-style-type: none"> <li>1. Selected to attend Global Chemists’ Code of Ethics Science and Technology Leadership Program, Melbourne, Australia; organised by the American Chemical Society (<b>2017</b>)</li> <li>2. SERC Fast Track Young Scientist Project, Department of Science and Technology (<b>2007</b>)</li> <li>3. Monbukagakusho (Japanese Government) Scholarship (<b>2002-04</b>)</li> <li>4. Junior and Senior Research Fellowships (University Grants Commission) <b>1998-2001</b></li> <li>5. Research Fellowship cum teaching assistantship (GATE) at IIT Delhi <b>1997-98</b></li> </ol>
<p><b>Association With Professional Bodies</b></p>

1. *Editing* Editorial Board Member, Chemistry Select (2021-2025)  
Member, Associate Editorial Board, Current Organic Chemistry (2019-2023)

*Reviewing* Analytical Methods; Analyst; BMC Chemistry; Chemistry-An Asian Journal; ChemistrySelect; Current Organic Chemistry; Chemistry Central Journal; Dyes and Pigments; Inorganic and Nano-Metal Chemistry; Journal of Organic Chemistry; Journal of Photochemistry and Photobiology A: Chemistry; Journal of Physical Chemistry Letters; Journal of Food Science; Journal of Material Chemistry C; Journal of Materials Science; Journal of Molecular Liquids; Journal of Biomolecular Structure and Dynamics; Metal-Organic, and Nano-Metal Chemistry; New Journal of Chemistry; RSC Advances; Photochemical & Photobiological Sciences; Synthesis; Sensors and Actuators B: Chemical; Tetrahedron Letters  
Reviewer of national science magazine Resonance

2. *Advisory*

3. *Committees and Boards*

4. **Memberships:** Life membership of Chemical Research Society of India (CRSI)  
Member, American Chemical Society (Annual)

5. *Office Bearer*

Other Activities

Member of various committees in the Department of Chemistry

Signature of Faculty Member