

Profile

Name: Dr. DAYALAN

Gender: Male; DOB: 15-06-1954



Qualification:

S. No.	Degree / Diploma	Subject	Name of the College / University	Year of Passing
1.	UG – B.Sc	Chemistry	Loyola College	1975
2.	PG - M.Sc	Chemistry	Loyola College	1977
3.	M.Phil.	Physical Chemistry	University of Madras	1987
4.	Ph.D.	Metal Complexes	University of Madras	1993

Aided ☒ Self-Supporting ☐ Management (Day) ☐

Department: CHEMISTRY

Total Teaching Experience at Loyola:

S. No.	Department	Category	From – To (Period)
1.	CHEMISTRY	AIDED	1977-
Teaching Experience (in Loyola) :			31 Years
Teaching Experience (Outside Loyola) :			Resource person for different programs
Total Teaching Experience :			31 Years

Research Activities:

No of M. Phil. as guide:

Guided: 42; Guiding: 6

No of Ph.D. as guide:

Guiding: 8

Positions Held (in Loyola):

S. No.	Name of the Position	Duration
1.	HOD	2008-

Positions Held (Outside Loyola):

S. No.	Name of the Position	Organization / Institution	Duration
1.	Member, Board of Studies	Bharathi Women's College, Chennai.	2003- 2005.
2.	Member, Board of Studies	The New College, Chennai-14.	2007-
3.	Member, Board of Examiners.	MCC, Tambaram, Chennai-59.	2007-
4.	Member, Board of Examiners.	University of Madras, Chennai-5.	2007-

Books Published:

S. No.	Title	Year	Publisher	Place
1.	Chemistry Quiz.	2005	<i>Sura Publications.</i>	Chennai-40
2.	Guruvarulum Thiruvarulum: Part-I (<i>The Grace of the Preceptor</i>).Part-I	2004	<i>Gnanacheri,Publications.</i>	Chennai-28
3.	Guruvarulum Thiruvarulum: Part-II (<i>The Concept of God</i>).	2005	<i>Gnanacheri Publications.</i>	Chennai-28
4.	Guruvarulum Thiruvarulum:Part-III (<i>Bakthi</i>).	2005	<i>Gnanacheri Publications.</i>	Chennai-28
5.	Guruvarulum Thiruvarulum: Part-IV (<i>The Concept of Pooja</i>). P	2005	<i>Gnanacheri Publications.</i>	Chennai-28

Journal / Articles / Books Published: Please refer page no 3

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Publications in Journals

1. Iron(II) reduction of *Trans*-bis(dimethylglyoximato)halogenopyridine cobalt(III) complexes : ***Kinetics and Mechanism***, A. Dayalan and V.R Vijayaraghavan, *J.Chem. Soc., Dalton Trans.*, 2491, **1992**.
2. Synthesis and characterisation of halogenocobalt(III) complexes of 3,8-dimethyl-5,6-benzo-4,7-diazadeca-3,7-diene-2,9-dione dioxime with substituted pyridines. A.Dayalan and V.R. Vijayaraghavan, *Indian J.Chem.*, **31A**, 800., **1992**.
3. Synthesis and characterisation of *Trans*-halogeno-pyridinecarboxamide bis(dimethylglyoximato)cobalt(III) complexes, V.R. Vijayaraghavan and A. Dayalan, *J.Indian Chem. Soc.*, **69**,383, **1992**.
4. Iron(II) reduction of halogenopyridinecarboxylatocobalt(III)-dioxime complexes: ***Kinetics and Mechanisms***, A.Dayalan and V.R. Vijayaraghavan, *Proc. Indian Acad. Sci., (Chem.Sci.)* **105**, 95., **1993** .
5. Iron (II) reduction of halogenocobalt(III) complexes of 3,8-dimethyl-5,6-benzo-4,7-diazadeca-3, 7-diene-2, 9-dione dioxime: ***Kinetics and Mechanism***, A.Dayalan and V.R. Vijayaraghavan, *Indian J.Chem.*, **32A**, 341, **1993**.
6. Chromium(II) reduction of cobalt(III) complexes of 3,8-dimethyl-5,6 benzo – 4,7-diazadeca-3,7-diene-2,9-dione dioxime: ***Kinetics and Mechanism*** ,A.Dayalan and V.R. Vijayaraghavan, *Indian J. Chem.*, **40A**, 959, **2001**.
7. Iron(II) reduction, protonation and iron(III) equilibria of some chlorocobalt(III)– dioxime complexes, A.Dayalan and A.Xavier, *Indian J. Chem.*, **43A**, 1076, **2004**.
8. Chromium(II) reduction of halogenocobaloximes containing coordinated pyridine or pyridinecarboxamides: ***Kinetics and Mechanism***, A.Dayalan and V.R.Vijayaragavan, *J.Indian Chem. Soc.*, **82**, 9, **2005**.
9. Physico-Chemical studies of Bore Well water of various places in Chennai, A.Dayalan, A.Karthick , T.Benin Raj, S . Prabhu and K.Jagan , *Asian J. Chem.*, **17**, 1590 , **2005**.
10. A kinetic study of Iron(II) Reduction of cobaloxime by visible spectrophotometric method , A.Dayalan and R.Balakrishna , *Asian J Chem.*, **17**, 1949 , **2005**.

11. Kinetics of reduction of Halogenopyridinecarboxamidocobaloximes by Potassium hexacyanoferrate(II) , A.Dayalan and A.Sahaya Raja, *Asian J Chem.*, **18** , 2583 , 2006.
12. Methylation of toluene with methanol over MnAPO-11 and ZAPO-11 , K Joseph Antony Raj, A Dayalan and V R Vijayaraghavan, *Indian J Chem.Tech.*, **13**, 329,2006.
13. Kinetics of Iron(II) reduction of some Chlorocobaloximes containing coordinated 4-Amino or 4-Cyanopyridine , A.Dayalan and C.Revathi, *J. Serb. Chem. Soc.*, **71**, 1311, 2006.
14. Effect of Transition metal ions on the oxidation of benzaldehyde by bromine, A. Dayalan* and S.Martin, *Asian J. Chem.*, **19**, 2659, 2007.
15. Toxic potential of 4-pyridinecarbothioamide and chloro4-pyridinecarbothioamidocobaloxime on fresh water cat fish, *clarias batrachus(linn.)*,A.Dayalan, M. Omprakasam , C. Revathi , M.Arul Ganesan and P.Meera , *J.Ecotoxicol. Environ.Monit.*, **17**, 319-327, 2007.
16. Synthesis, characterization and antimicrobial activity studies of 1-& 2-[4-((4-Chloro phenyl) phenyl methyl)-1-piperazinyl] sulphonyl naphthalenes, A.Dayalan, P.Gurumurthy, C.Suneel Manohar Babu and V.Visweswaran , *Asian J. Chem.*, **19**, 5041-5048 , 2007.
17. (N-tert-Butylpyrazine-2-carboxamide- κN^4)chloridobis(dimethylglyoximato- $\kappa^2 N$, N')cobalt(III) hemihydrate , S.Martin , C.Revathi , Babu Varghese and A.Dayalan , *Acta Cryst.*, **E63**, m2670, 2007.
18. N-1-Butylpyridine-4-thiocarboxamide
T. Kavitha, C. Revathi, M. Hemalatha, A. Dayalan and M.N. Ponnuswamy , *Acta Cryst.*, **E64**, o-114 , 2008.
19. Dichlorido(dimethylglyoximato- $\kappa^2 N,N'$)-(dimethylglyoxime- $\kappa^2 N,N'$)cobalt(III)
P. Jothi, C.Revathi, A.Dayalan , P.Ramesh and A.Subiapandia, *Acta Cryst.*, **E64**, m300-m301 , 2008.
20. Synthesis, characterization and antimicrobial activity studies of 1-& 2-[(2-(3,4-Dimethoxy phenyl) ethyl), methyl amino] sulphonyl naphthalenes , A.Dayalan, C.Suneel Manohar Babu and V. Visweswaran , *Asian J. Chem.*, **20**, 1411-1419 , 2008.

21. **Halocobaloximes containing coordinated pyrazine, pyrazine carboxylic acid and pyrazine carboxamide: microwave assisted synthesis, characterization and antibacterial activity**, S. Martin, C. Revathi, A. Dayalan, N. Mathivanan and V. Shanmugaiya, *Rasayan J. Chem.*, Vol.1, No.2 , 378-389 , **2008**.
22. **Aquatic toxicity of dimethyl sulfoxide on the Indian Major Carp, Catla catla (Hamilton)**, M. Omprakasam , A. Dayalan and M. Arulganesan, *Ind.J.Sci.Technol.*, **1** , No 4 , Sep. **2008**.
23. **Chloridobis[diphenylglyoximato(1-)-K²N,N'](1H-imidazole- κ N³)cobalt(III)hemihydrates**, P.Meera , C.Revathi and A. Dayalan, *Acta Cryst.*, **E65**, m140-m141, **2009**.
24. **(N⁴-n-Butylpyridine-4-carbothioamide- κ N⁴)chloridobis(dimethylglyoximato- κ ²N,N')cobalt(III) hemihydrates** , C. Revathi, A. Dayalan and K. SethuSankar *Acta Cryst.*, **E65**, m795–m796, **2009**.
25. **Halocobaloximes containing axially coordinated Imidazole or Histidine: Microwave assisted synthesis, characterization and antibacterial activity**, A.Dayalan , P.Meera , K.Balaraju, P.Agastian and S.Ignasimuthu, *J. Indian Chem.Soc.*, **86**, 628-632, **2009**.
26. **N,N'-Dihydrogenpiperazoniumdichloridobis(dimethylglyoximato- κ ² N, N') cobaltate(III) dihydrate** , S. Martin, C. Revathi and A. Dayalan, *J.Chem.Cryst.*, **39**, 908-912, **2009**.
27. **Synthesis and characterization of halocobaloximes and its derivatives for antimicrobial activity**, S. Martin and A. Dayalan, *Ind.J.Sci.Technol.*, Vol.2 No. 9 , Sep., **2009**.
28. **Cis-Aquachloridobis(1,10-phenanthroline- κ ²N,N)cobalt(II) chloride 2.5-hydrate**, K. Arun Kumar, A. Dayalan and K. SethuSankar, *Acta Cryst.*, **E65**, m1300–m1301, **2009**.
29. **Growth and characterization of a new non-linear optical barium-strontium borate (BSB) single crystal**, K.Praha, T. Rejesh Kumar, Shi Feng Du, M. Vimalan, A. Dayalan and P.Sagayaraj, *Materials Chemistry Physics*, **121**, 22-27 **2010** (doi:10.1016/j.matchemphys.2009.12.037).

- 30. Preparation, characterization and crystal structure of some imino Schiff bases,** V. Jeseentharana, J. Selvakumara, A. Dayalana, Babu Varghese and K.S. Nagarajaa, (doi :10.1016 / j. molstruc.2009.12.024).
- 31. Humidity Sensing Properties of CuO, ZnO and NiO Composites,** V. Jeseentharani, B.Jeyaraj, J.Pragasam, A.Dayalan and K. S. Nagaraja, *Sensors & Transducers Journal* **32 (113)** 48-55, 2010. <http://www.sensorsportal.com>.
- 32. Humidity Sensing Characteristics of Bi₂O₃- added TiO₂ Composites ,** Vedhakkani JESEENTHARANI, John PRAGASAM, Arunachalam DAYALAN, Karachalacheruvu Seetharamaiah NAGARAJA and Boniface JEYARAJ, *Sensors & Transducers Journal*, **Vol. 123, Issue 12, December 2010**, pp. 91-99.

II. Publications in Souvenirs and Proceedings

- 33. Charge-transfer complexes of 7, 7, 8, 8-Tetracyanoquinodimethane (TCNQ) with pyridine,** A.Dayalan and R.Raghavan, *Sounier*, “Annual convention of chemists”, IIT, Madras, **1978**.
- 34. Effect of metal ions on the oxidation of α -amino acids by chloramine-T**
V.K. Uma Maheswari and A. Dayalan , *Souvenir* , “Inter National Symposium on Chemical Education and Research” , Dept. of Chemistry, Loyola College, Chennai-34 , p-111, **2004**.
- 35. Protonation and thermal studies of some cobalt(III)-dioxime complexes,**
G. Charles Edwin Raja, S. Devaraj, D. A. Jose , K.Padmanaban and A. Dayalan, *Souvenir*, “Inter National Symposium on Chemical Education and Research”, Dept. of Chemistry, Loyola College, Chennai-34, p125, **2004**.
- 36. Synthesis, characterisation and iron(II) reduction of halogenopyrazinebis(dimethylglyoximate)cobalt(III) complexes,** A. Xavier, A.Dayalan and V.R. Vijayaraghavan, *Souvenir*, “Inter National Symposium on Chemical Education and Research”, Dept. of Chemistry, Loyola College, Chennai-34 , p-127, **2004**.
- 37. Synthesis and characterization of cobaloximes containing nitrogen hetero cycles or α -amino acid as axial ligands,** A. Dayalan , S. Jerome Das and P.

Mary Pamela, *Proceedings of the "41st Annual Convention of Chemists"*, Indian Chemical Society, Kolkata, p-A15, **2005**.

38. **Iron(II) reduction of some pentamminecobalt(III) complexes**, A.Dayalan, J. Sudan Juliet and R.Balakrishna, *Souvenir, "National Seminar on recent Trends in Applied Chemistry"*, Dept. of Chemistry, St. Joseph College, Trichirapalli, p-8, **2005**.
39. **Cobalt(III) macrocyclic complexes having imidazole and benzimidazole as axial ligands**, A.Dayalan, Maria Selvi and A.Sahaya Raja, *Souvenir, "National Seminar on recent Trends in Applied Chemistry"*, Dept. of Chemistry, St. Joseph College, Trichirapalli, p-10, **2005**.
40. **Tin(II) reduction of some cobaloximes**, A.Dayalan, M.Gnana Sekar and T.Niruban Balu, *Souvenir, "National Seminar on recent Trends in Applied Chemistry"*, Dept. of Chemistry, St. Joseph College, Trichirapalli, p-42, **2005**.
41. **Biochemical computers**, A.Dayalan and S.J. Ananthakrishnan, *Souvenir, "National level conference on recent trends in chemistry of biologically interesting complexes"*, Dept of Chemistry, VHNSN College, Virudhunagar, p-35, **2005**.
42. **The concept of osmotic fragility test to evaluate the membrane strength of RBC's of normal and abnormal cells in micro organism**, A.Dayalan* and M.Arul Ganesan, *Proceedings of the "4th State level seminar on Chemistry in health and nutrition"*, Dept of Chemistry, Deivanai Ammal College for Women, Vilupuram, p-02, **2005**.
43. **Isotachopheresis for albumin purification of human serum** A.Dayalan* and M.Arul Ganesan, *Proceedings of the "International conference on Recent advances in Chemistry"*, Dept. of Chemistry, Auxilium College, Vellore, p-89, **2006**.
44. **Micro wave assisted synthesis of halopyridinecobaloximes: Antimicrobial activity, protonation equilibria and red-ox studies**, A.Dayalan, C.Revathi, M. Arul Ganesan and P.Meera, *Proceedings of the "42nd Annual Convention of Chemists"*, Indian Chemical Society, Kolkata, p-A9, **2006**.
45. **Salen and cobalt-salen complexes as catalyst for the decomposition of Hydrogen Peroxide**, A. Dayalan, C.Revathi and S.Sowmya, *Proceedings of the*

- “State Level Seminar on “Recent Trends in Physical Sciences”, Tiruchengode, proceedings, p-10, 2006.*
46. **Stereo Chemical studies of cobaloximes substituted with α -amino acids**, A. Dayalan, P.Meera, *Proceedings of the State Level seminar on “Recent Trends in Chemistry and Biochemistry”, Theivanai Ammal College for Women, Villupuram, p-14, 2006.*
 47. **Microwave assisted synthesis of 3,8-Dimethyl-5,6-benzo -4,7-diazadeca-3,7-diene-2,9-dione dioxime and its Cobalt(III) complexes –catalytic activity** , A.Dayalan and C.Revathi, *Proceedings of the “43rd Annual Convention of Chemists”* , Indian Chemical Society,Kolkata, p-45 , **2006..**
 48. **Cyclic Voltammetric studies on halogeno Cobaloximes containing axially coordinated α -amino acids**, A.Dayalan and P.Meera , *Proceedings of the “43rd Annual Convention of Chemists”* , Indian Chemical Society,Kolkata, p-20 , **2006.**
 49. **Dihalo cobaloximes-Halogen displacement by heterocyclic α -amino acids** , A. Dayalan, P.Meera and T.K. Shabeer , *Proceedings of the National seminar on “Eco- , Sono- and Nanochemistry and Recent advancements in Chemistry”*, The New College, Chennai-14 , p-85 , **2006.**
 50. **Antibacterial activity and aquatic toxicity of some Cobaloximes**, A Dayalan and C Revathi, *Proceedings of the National Conference on “Eco-, Sono- and Nanochemistry and Recent advancements in Chemistry”*, The New College, Chennai-14 , p-88, **2006..**
 51. **Microwave assisted synthesis of halopiperazinamidocobaloxime-Structure activity relation** , A.Dayalan and S.Martin, *Proceedings of the National seminar on “Eco-, Sono- and Nanochemistry and Recent advancements in Chemistry”*, The New College, Chennai-14 , Proceedings, p-94 , **2006.**
 52. **Kinetics and mechanism of the decomposition of hydrogen peroxide catalysed by cobaloximes containing coordinated pyrazine**, A. Dayalan, S. Martin and M. Arul Ganesan, *Proceedings of the National Conference Nutraceuticals and the future of Medical Science* , Kongunadu Arts and Science College (Autonomous), Coimbatore-641 029, p-69 , Feb., 22-23, **2007.**
 53. **Kinetics and mechanism of the decomposition of hydrogen peroxide catalysed by cobaloximes containing coordinated pyridine-A comparative**

- study with peroxidase**, A. Dayalan, S. Martin and M.Arul Ganesan, *Proceedings of the National Seminar on Non-Conventional Techniques in synthesis (NSNCT-2007)*, Dept. of Chemistry, Ethiraj College (Autonomous), Chennai-8 , p-9 , Feb., 23, **2007**.
- 54. Cobaloximes containing equatorial dimethylglyoxime, dm₂H₂ or diphenylglyoxime, dp₂H₂: Synthesis and comparison of their properties**, A.Dayalan and C.Revathi, *Proceedings of the “44th Annual Convention of Chemists”*, Indian Chemical Society , **A-21 (OP-48) , 2007**.
- 55. Effect of axial substitution on aromatic chelates** , A.Dayalan and P.Meera, *Proceedings of the “44th Annual Convention of Chemists”* , Indian Chemical Society, **C-30 (OP-81), 2007**.
- 56. Pyridinecarbothioamidocobaloximes: Crystal structure and medicinal properties**, C.Revathi , P. Meera and A.Dayalan , *Proceedings of the International Conference Panimalar*, **2007**.
- 57. Cobaloximes – A structural comparison by single crystal XRD studies**, A. Dayalan, P. Meera and C. Revathi, *Proceedings of the 45th Annual convention of chemists and International conference on Recent Advances in Chemistry (Indian chemical society)*, Ing(OP) - 45, p- A 20, **2008**.
- 58. Pyridinecarbothioamides – Spectral studies** , A. Dayalan, C. Revathi and P. Meera , *Proceedings of the 45th Annual convention of chemists and International conference on Recent Advances in Chemistry (Indian chemical society)* , Org (OP) – 47, p- 23, **2008**.
- 59. Online Teaching of Chemistry-- Green Revolution in Education**, A. Dayalan , P. Meera and D. Sahaya Martin Rajesh , *Proceedings of the National Conference on Chemistry, The essential Science of the 21st century*, (WCC, Chennai-6) , **2008**.
- 60. Crystal structure and antibacterial activity of chlorobis(diphenylglyoximate)imidazolecobalt(III) hemihydrate**, A. Dayalan, P. Meera, and C. Revathi, *Proceedings of the “46th Annual Convention of Chemists”* , Indian Chemical Society, Kolkata, **p-C 28, 2009**.
- 61. Antimicrobial screening and XRD studies of some substituted aromatic Schiff's bases**, A.Dayalan*, R. Vasanthan and M.Amutha Selvi *Proceedings of*

the “46th Annual Convention of Chemists”, Indian Chemical Society, Kolkata, **p-C 24, 2009.**

62. **Electrochemical characterization of poly (Eriochrome black-T) and Au/poly (Eriochrome black-T) modified GCE and the simultaneous determination of dopamine, ascorbic acid and uric acid using these electrodes,** V. Jeseentharani, P. Tamil selvi, A. Dayalan, K. S. Nagaraja and B. Jeyaraj, Proceedings of the National conference on Recent Advances in Electroanalytical Techniques, Department of Chemistry, Gandhigram Rural Institute – Deemed University, Gandhigram, Dindugal , PP57, p-95-96, Feb 25-26, **2010.**
63. **Antibacterial screening of halocobaloximes containing Proline, Pyrrolidine as axial ligands,** Meera. P, Amutha Selvi. M and Dayalan. A, National seminar on New Frontiers in Chemistry, NSNFC-2010, Department of Chemistry Annamalai University, (OP-39), Pg-32.P, March, **2010.**
64. **Antibacterial activity and cytotoxicity of Metal complexes,** Meera. P, Amuthaselvi. M and Dayalan. A*, p-27(IO-4), UGC sponsored National Seminar on Chemistry - Current Focus, Department of Chemistry, Madras Christian College, Ch-59, March, 24, **2010.**
65. **Antimicrobial activity and Kinetic Studies of Some Halopyrazine cobaloximes,** Martin.S, Jothi.P and Dayalan.A* p-29(IO-5) UGC sponsored National Seminar on Chemistry - Current Focus, Department of Chemistry, Madras Christian College, Ch-59, March, 24, **2010.**
66. **Synthesis and antibacterial screening of a Cobalt(III) complex,** Arun Kumar.K, Amutha Selvi.M, Jothi.P and Dayalan.A*,p-51(IP-3), UGC sponsored National Seminar on Chemistry - Current Focus, Department of Chemistry, Madras Christian College, Ch-59, March, 24, **2010.**
67. **Crystal structure, antibacterial and toxicity screening of Diaquatetrakis(imidazole)cobalt(II) bromide: [Co(Imi)₄(H₂O)₂]Br₂,** Meera.P, Amutha Selvi. M and Dayalan.A*, OL(1),Pg-13, Recent Advances in Inorganic and Nano Chemistry, RAINC-2010, Department Of Inorganic Chemistry, Madurai Kamaraj University, Madurai – 625021, **2010.**

68. **Electrochemical characterization of Ni(II) complex modified GCE and its simultaneous determination of dopamine, ascorbic acid and uric acid, V. Jeseentharani, P. Tamil selvi, A. Dayalan, K. S. Nagaraja, Boniface Jeyaraj,**61st Annual meeting of the international Society of Electrochemistry, NICE, France, **2010.**
69. **Magnetic Moment Studies of Dichlorotetra (4-Cyanopyridine)Cobalt(II)**
M. Amutha selvi and A.Dayalan, **2010.**
70. **Dichlorotetra(4-N,N'-Dimethylaminopyridine)cobalt(II): Magnetic Moment Studies by Evans Method , M. Amutha Selvi and A. Dayalan, 2010.**
71. **The effect of magnetic behavior on toxicity of some cobalt complexes**
P.Meera and A.Dayalan , Coimbatore, **2010.**
72. **Para magnetism in a typical Cobalt complex , P.Meera and A.Dayalan , Indian Chem., Soc., 2010.**
73. **Antibacterial activity of cobaloximes containing tryptophane and indole as nitrogen donors , Meera .P and Dayalan . A , Rajastan, 2010.**
74. **Tris(1,10-phenanthroline)cobalt(III) Chloride: Synthesis, Characterization and Anti Fungal Activity , Arun kumar, K. Amutha Selvi, M. and Dayalan, A.* , 2010.**

III. Publications as Books (*Academic Level*)

75. **General Chemistry (*For Autonomous College Curriculum*), A.Dayalan ,Dept. of Chemistry, Loyola College, Chennai-34, 1983.**
76. **General Chemistry For B.Sc Allied Chemistry, A.Dayalan and N.S.Gnanapragasam , Dept. of Chemistry, Loyola College, Chennai-34, 1990.**
77. **Model Papers for Higher Secondary Chemistry, A.Dayalan, Ayyanar Publications, Chennai-102, 1993.**
78. **Venus Centum series for Higher Secondary Chemistry, A.Dayalan, Venus Publications, Chennai-17, 1994.**
79. **Chemistry Quiz, A.Dayalan, Sura Publications, Chennai-40, 1993 (3rd .Reprint September, 2005).**