



NAGARAJAN LOGANATHAN
UGC – Assistant Professor (Academic Level – 11)

Contact

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Scopus: <https://www.scopus.com/authid/detail.uri?authorId=9044708600>

Academic Qualifications:

B.Sc (Chemistry) Ramakrishna Mission Vivekananda College, Chennai, 1998-2001.

M.Sc. (Chemistry) Indian Institute of Technology, Madras (IIT-Madras), 2001-03.

Ph.D. (Chemistry) Indian Institute of Technology, Kanpur (IIT-Kanpur), 2003-09.

Title of the Thesis: *Multinuclear Copper Complexes Containing Phosphonate and/or carboxylate Ligands under the guidance of Prof. Vadapalli Chandrasekhar (former Director TIFR Hyderabad)*

Postdoctoral Research Lund University, Sweden (Apr. 2009-May 2012) and University of the Free state, Bloemfontein, South Africa (Jun. 2012-Nov. 2014)

Teaching Experience: 09 Years 10 months

General Chemistry, Coordination Chemistry, Bio-Inorganic Chemistry, Electronic Spectroscopy, Group Theory, Magnetochemistry, Multinuclear NMR, Nuclear Chemistry and X-ray Crystallography.

Research Experience: 21 Years 2 months

As UGC- Assistant Professor from Dec 2018 (Academic Level 11) Bharathidasan University, Tiruchirappalli.

Dec 2014 - Dec 2018 as UGC- Assistant Professor (academic level 10) Bharathidasan University, Tiruchirappalli.

- ❖ Structural inorganic chemistry of transition metal complexes towards biological applications.
- ❖ Metal carbonyls as a model for CO releasing molecules and Radiopharmaceuticals
- ❖ Heterogenous photocatalyst such as Au-TiO₂ and Au-ZnO towards various organic transformations
- ❖ Organoboronates and BODIPY type boron complexes towards material applications

Post Doctoral Research

As Single crystal X-ray Crystallographer and as Researcher

Additional Responsibilities

1. Departmental M.Sc Course Co-ordinator (2016-2020) and 2021-till date
2. Departmental NAAC Co-ordinator (2018-2024)
3. Departmental Library in-charge (2019 onwards)
4. Departmental Student Induction Program co-ordinator (2019 onwards)

Areas of Research

Single Crystal X - ray Crystallography, Structural Chemistry of Transition metal Organometallic Compounds and their Applications, Heterogenous photocatalysis

Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	Ph.D.	00	07
	M.Phil.	05	00
Project	PG	45	06
	UG / Others	00	00

Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals
23	01	01	00	00

Cumulative Impact Factor (as per JCR) : 57.6
h-index : 10
i10 index : 10
Total Citations : 378

Funded Research Projects

Completed Projects

S. No	Agency	Period		Project Title	Budget (Rs. In Lakhs)
		From	To		
1	UGC India	2015	2017	Start-up grant	6.0
2	DST - SERB India	2017	2020	DESIGN AND DEVELOPMENT OF APPLICATIONS	32.52
3	DST-SERB India	2019	2022	Transition metal oxo and hydroxo cages... biological applications	42.725

Ongoing Projects

S.	Agency	Period	Project Title	Budget
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No		From	To		(Rs. In lakhs)
1	RUSA India	2021	2024	Activation of greenhouse gases... OLED materials	22.5
2	SERB India	2023	2025	As Co-PI Pincer supported nickel(II) ... ADC strategy	34.5

Distinctive Achievements / Awards

1. DST – SERB Early Career Research Award, for the project entitled “ Design and Development of ... Applications (2017-2010).
2. Post-Doctoral Fellowship, Crafoord and Karl - Trygger Foundation, Sweden (Apr.2009 – Apr.2012) Lund University, Sweden
3. Post -Doctoral Fellowship, South African National Research Foundation, (SA - NRF/THRIP), University of the Free State Materials and Nanoscience Research Cluster, South Africa (Jul. 2012 –Nov 2014)
4. Research grant of 50000 SEK, awarded for the research planning and development from Royal Swedish Academy Physiographic society, Lund, Sweden (2009-10)

Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized: 10

1. **Organizing committee member** of IYCR 2014 Pan African and South African Summit jointly organized by International Union of Crystallography (IUCR), UNESCO, University of the Freestate, Department of Chemistry, South African Government’s Department of Science and Technology (DST) and European Crystallographic Association held in University of the Freestate Bleomfontein South Africa on Oct 12-17 2014.
2. **Deputy Coordinator for UGC Sponsored Refresher Course in Chemistry** for College Teachers held in UGC-HRD centre, Khajamalai campus, Bharathidasan University, Tiruchirappalli on Jan 2015.
3. **Course Co-ordinator for GIAN Sponsored** “Chemical Kinetics and Reaction Mechanism of Transition Metal Chemistry”, a five days programme held in Bharathidasan University, Tiruchirappalli on Jan 7-11 2019.
4. **Departmental coordinator** for the Student Induction Programme (BDU-SIP-19) held in Bharathidasan University between 8th July 2019 to 12th July 2019.
5. **Deputy Coordinator for One day ACS-DST workshop** held in Bharathidasan University, Tiruchirappalli Dec 9th 2019 jointly organized by American Chemical

Society (ACS) - Department of Science and Technology (DST), India - Vigyan Prasar.

6. **Departmental coordinator** for the Student Induction Programme (BDU-SIP-21) held in Bharathidasan University between 29-11-2021 to 01-12-2021.
7. **Departmental coordinator** for the Student Induction Programme (BDU-SIP-22) held in Bharathidasan University between 07-11-2022 to 11-11-2022.
8. **Departmental coordinator** for the Student Induction Programme (BDU-SIP-23) held in Bharathidasan University on 03-10-2023 to 07-10-2023.
9. **Arranged a Special Chemistry Lecture** by Prof. G. Anantharaman, Chemistry, IIT-Kanpur held in Bharathidasan University, Tiruchirappalli on 19 Jan 2024.
10. **Departmental coordinator** for the Student Induction Programme (BDU-SIP-24) held in Bharathidasan University on 09-09-2024 to 13-09-2024.

Events Participated

Conferences / Seminars / Workshops: 25

1. **Attended ACS Science Talk Webinar** organized by American Chemical Society (ACS) on the topic "Distal C-H functionalization via electrophilic C-H metalation" on 24th May 2024.
2. **Attended Thieme web seminar** on the topic "Cross-Dehydrogenative Coupling" presented by Science of Synthesis on 15th Feb 2024.
3. **Attended and presented poster** at the one-day symposium on Recent Advances in Inorganic Molecules to Materials (RAIMM-23)" 04th Nov, 2023 at IIT Kanpur, India.
4. **Attended IIT Kanpur's 64th Foundation Day** as an Alumni on 02nd Nov 2023 at IIT "Kanpur.
5. **Attended a special lecture on "X-ray photoelectron spectroscopy - An Overview"** by Dr. Pragati Chaturvedi, Thermo Fisher Scientific India Ltd held in School of Physics, Bharathidasan University, on 27th Nov 2023.
6. **Attended the online Centenary WoW session** Webinar by Padmashri Dr. Mysamy Annadurai organized by State Project Directorate RUSA TN (via YouTube streaming) on 21st Sep 2023.
7. **Attended ACS Science Talk Webinar** organized by American Chemical Society (ACS) on the topic " Advances in semiconducting polymer synthesis on 20th Sep 2023.
8. **Attended ACS Science Talk Webinar** organized by American Chemical Society (ACS) on the topic" Designing a greener energy conversion system for a sustainable future" on 25th Aug. 2023.
9. **Attended ACS Science Talk Webinar** organized by American Chemical Society (ACS) on the topic Exploring Novel Strategies for Harnessing 'Molecular Frustration' in Main-Group-Catalyzed Organic Synthesis" on 18th Aug 2023.

10. **Attended the Full agenda of the ACS publication Summit** “Organometallic Series: Synergy for Molecular Transformation” on 09th Dec 2022.
11. **As a resource person** for “Short Term Course on Analytical Techniques”, on the topic entitled “Single Crystal X-ray Analysis an Overview” held in Annamalai University, Chidambaram, 06th Dec 2018
12. **Invited Lecture** at First International symposium on “Main-group Molecules to Materials (MMM-2018), held in Indian Institute of Sciences, Bangalore, on 28th Oct to 31st Oct. 2018.
13. **As a resource person** for One Day UGC funded International Seminar on “FRONTIERS IN LIFE AND CHEMICAL SCIENCES” on the topic entitled “Inorganic Elements in Biological System and Medicine” held in Vellalar College for Women, Erode 19th Sep 2018.
14. **Participated and acted as a judge for the oral presentation** in International Conference on Sustainable Energy Technologies (i-SET 2018) held in Bharathidasan University, Tiruchirappalli, Jun 27-28 2018.
15. **Attended Academies Lecture Workshop** on “Emerging Trends in Chemical Synthesis” held in Bharathidasan University, Tiruchirappalli, Mar 22-24 2018
16. **As a resource person** for UGC Sponsored One day Seminar on “METALLO BIOCHEMISTRY” on the topic of “ The Fantastic World of Metallobiomolecules” held in Seethalakshmi Ramaswami College for Women, Tiruchirappalli, 25th Jan 2018.
17. **Participated** in the “24th Congress and General Assembly of the International Union of Crystallography” from 21-28 August 2017 organized by University of Hyderabad and held in International Convention Centre Hyderabad.
18. **Participated** in DST-SERB Workshop on “Mentoring Ph.D Students and Young Faculty organized by Department of Chemistry, Bharathidasan University, Tiruchirappalli Feb 17-18 2017.
19. **Participated** in “National Workshop on Catalytic Organic Transformation (NWCOT-16), held in Bharathidasan University, Tiruchirappalli, Oct 20-21 2016
20. **Participated and acted as a judge for the poster presentation** in second National Conference on Nanophotonics (NCNP-2016) held in Bharathidasan University, Tiruchirappalli March 18-19 2016
21. **Participated in** “International Conference on Nanomaterials for Energy, Environment, Catalysis and Sensors (ICNEECS-15) held in Madurai Kamaraj University, 11-12 Dec 2015.
22. **Participated in** 10th Mid-year Chemical Research Society of India (CRSI) symposium in chemistry jointly organized by National Institute of Technology, Tiruchirappalli and Bharathidasan University, Tiruchirappalli Jul 23-25 2015.
23. **Presented a poster** in 4th CHEMFEST, Symposium in chemistry, organized by Department of Chemistry, IIT Kanpur, India, Mar. 2008.
24. **Presented poster** in Modern Trends in Inorganic Chemistry (MTIC-XII) a Biennial International Symposium in Inorganic Chemistry organized by Department of Chemistry, IIT Madras, India, Dec. 2007.
25. **Presented poster** in 1st CHEMFEST, Symposium in chemistry, organized by Department of Chemistry, IIT Kanpur 2005.

Other Training Programs

1. UGC Sponsored Refereshar Course in Chemistry held in Bharathiar University, Coimbatore, 4th July to 24th July 2018.
2. UGC Sponsored 101st Orientation Programme, held in Bharathidasan University Tiruchirappalli, 18th May 2018 to 14th Jun 2018
3. Faculty Development Programme on Enhancing Learning Outcomes Through Effective Teaching organized by Internal Quality Assurance Cell and UGC- HRD centre Bharathidasan University 28th Nov 2018.

Overseas Exposure / Visits

1. Poster and Invited Flash Presentation in IYCR 2014 Pan African and South African Summit jointly organized by International Union of Crystallography (IUCR), UNESCO, University of the Freestate, Department of Chemistry, South African Government's Department of Science and Technology (DST) and European Crystallographic Association held in University of the Freestate Oct 12-17 2014
2. Invited Lecture in Young Crystallographer Meeting as a part of European Crystallographic Meeting (ECM 28) Aug 25 -29 2013; jointly organized by European Crystallographic Association and University of Warwick, United Kingdom
3. Presented a Poster in ECM 28 Aug 25-29, 2013 jointly organized by European Crystallographic Association and University of Warwick, United Kingdom
4. Invited Lecture in INORG 2013 conference 30th Jun - 4th Jul 2013, organized by University of Kwazulu - Natal, Durban, South Africa
5. Presented a Poster in INORG 2013 conference 30th Jun- 4th Jul 2013, organized by University of Kwazulu-Natal, Durban, South Africa
6. Delivered a talk in Department of Chemistry, University of the Free State, Bloemfontein, South Africa; Apr 2013
7. Delivered a talk in Centre for Analysis and Synthesis (CAS Unit), Lund University, Sweden. Mar 2011
8. Invited Lecture in CRYSTENG Meeting in Tallinn, August 26-29, 2009, organized by Department of Chemistry, University of Tallin, Estonia.
9. Delivered a talk in Centre for Analysis and Synthesis (CAS Unit), Lund University, Sweden. May. 2009

Membership in

Professional Bodies

1. Member of European Crystallographic Association (ECA)
2. Member of South African Crystallographic Society (SACrS)
3. Member of South African Chemical Institute (SACI)
4. Member of Swedish Chemical Society, Lund, Sweden 2009 - 2012

Academic Bodies (such as Board of Studies etc.,)

1. Board of Studies, School of Chemistry, Bharathidasan University 2017 onwards.

Others

1. Reviewer in Spectrochimica Acta, Sciencedirect
2. Reviewer in Journal of Molecular Structure, Sciencedirect.

Others

1. No. of PhD Thesis evaluated : 04
2. No. of PhD Public Viva Voce Examination conducted : 02

Publications

1. Thangamuniyandi Pilavadi, Soundararajan Krishnan, **Nagarajan Loganathan**, Bis[μ -3-(pyridin-2-yl)pyrazolato]bis-[acetato-(3,5-di-methyl-1H-pyrazole)-nickel(II)]. IUCR Data, **2024**, 9(8), x240810.
2. Manikumar Athan, Soundararajan Krishnan, **Nagarajan Loganathan**, trans-Dibromidotetrakis(5-methyl-1H-pyrazole- κ N²)manganese(II), IUCR Data, **2024**, 9(3), x240237.
3. Manikumar Athan, J Josephine Novina, **Nagarajan Loganathan** Synthesis, molecular structure, DFT studies, non-covalent interaction plots, Hirshfeld surface analysis and molecular docking studies of homoleptic Mn(II)(4,4,4-trifluoro-1-phenyl-1,3-butanedione)₂ J. Mol. Struct. **2023**, 1293, 136314. (IF: 4.0)
4. Leandra Herbst, Hendrik G. Visser, Andreas Roodt, Maryke Steyn and **Nagarajan Loganathan** Crystal structure of (2-(benzoyl)phenolato- κ^2O,O')-trans-dichlorido - cis- bis(methoxido) niobium(V), C₁₅H₁₅Cl₂NbO₄ Z. Kristallogr. NCS, **2015**, 230(4), 345-47. (IF: 0.3)
5. An efficient protocol for the exo-mono and exo, exo-bis functionalization of the diazocine ring of Troger base. Sami Dawaigher, Kristoffer Mansson, Erhad Ascic, Josep Artacho, Roger Martensson, **Nagarajan Loganathan**, Ola F. Wendt, Michael Harmata, Victor Sniekus and Kenneth Warnmark J. Org. Chem. **2015**, 80(24), 12006-14. (IF: 3.3)
6. Synthesis, molecular structure and chiroptical properties of dibenzylidene derivatives of bicyclo[3.3.1] nonane and brexane. Sigita Stoncius, Algirdas Neniskis, **Nagarajan Loganathan** and Ola F. Wendt. Chirality, **2015**, 27(10), 728-37. (2.8)
7. Cyclometallated gold(III) aryl-pyridine complexes as efficient catalysts for three-component synthesis of substituted oxazoles. von Wachenfeldt, Polukeev Alexey, **Loganathan Nagarajan**, Paulsen Filip, Röse Philipp, Garreau Marion, Ola Wendt, Daniel Strand Dalton Trans. **2015**, 44(12), 5347-53. (3.5)

8. Crystal structure of (Z)-4,4,4-trifluoro-3-((2-hydroxyphenyl)amino)-1-(thiophen-2-yl)but-2-en-1-one, C₁₄H₁₀F₃NO₂S. Ramakirushnan Suriya Narayanan, **Nagarajan Loganathan** Andreas Roodt *Z. kristallogr. NCS* **2015**, *230(2)*, 77-78. (0.3)
9. Synthesis and Kinetics of Sterically Altered Photochromic Dithizonatomercury Complexes. Ernestine Alabaraoye, Karel G. von Eschwege **Nagarajan Loganathan J. Phy.Chem. A** **2014**, *118(46)*, 10894-901. (2.7)
10. Synthesis and Crystal Structure of an Anionic Linear Trinuclear Copper(II) Complex Containing 2-Thenoyltrifluoroacetato and Acetato Ligands **Loganathan Nagarajan**, Roodt Andreas *Chinese J. Struct Chem.(Jiegou Huaxue)* **2014**, *33(1)*, 19-26. (5.9)
11. Crystal structure of 2,3-dicyano-1,4-phenylene bis(trifluoromethanesulfonate), C₁₀H₂F₆N₂O₆S₂ Johannes H. van Tonder, **Loganathan Nagarajan**, Mukut Gohain, Barend C. B. Bezuidenhoudt *Z. kristallogr. NCS* **2014**, *229(4)*, 357-58. (0.3)
12. Catalytic Three-Component Domino Reaction for the Preparation of Trisubstituted Oxazoles. Henrik v. Wachenfeldt, Philipp Röse, Filip Paulsen, **Nagarajan Loganathan**, Daniel Strand *Chem. Eur.-J.* **2013**, *19(24)*, 7982-88. (3.9)
13. 4-(2-Bromophenyl)-2-phenylpyrano[3,2-c]chromen-5(4H)-one. Mukut Gohain, **Loganathan Nagarajan**, Barend C. B. Bezuidenhoudt, Andreas Roodt *Acta Cryst.* **2012**, *E68(12)*, o3279. (0.5)
14. 2,5-dihexylthiophene 1,1 - dioxide, Johannes van Tonder, Mukut Gohain, **Loganathan Nagarajan**, Barend C. B. Bezuidenhoudt *Acta Cryst.* **2012**, *E68(12)*, o3437 (0.5)
15. Structural and spectroscopic characterization of tetranuclear iron complexes containing a P₂RN₂^{Ph} bridge. Michael Karnahl, Andreas Orthaber, Stefani Tschierlei, **Loganathan Nagarajan**, Sascha Ott, *J. Coord. Chem.* **2012**, *65(15)*, 2713-23. (2.2)
16. Multicomponent Assembly of Anionic and Neutral Decanuclear Copper(II) Phosphonate Cages Vadapalli Chandrasekhar, **Loganathan Nagarajan**, Sakiat Hussain, Kandasamy Gopal, Surajit Ghosh and Sandeep Verma *Inorg. Chem.* **2012**, *51(10)*, 5605-16. (4.3)
17. Carboxylation of Pincer PCP Platinum Methoxide Complexes Under formation of Metalla Carbonates. Athimoolam Arunachalampillai, **Nagarajan Loganathan**, Ola F Wendt *Polyhedron*, **2012**, *32(1)*, 24-29. (2.4)
18. Multicomponent assembly of anionic and neutral decanuclear copper(II). phosphonate cages Chandrasekhar Vadapalli, **Nagarajan Loganathan**, Hossain Sakiat, Gopal Kandasamy, Ghosh Surajit, Verma Sandeep. *Inorg. Chem.* **2012**, *51*, 5605-5616 (4.3)
19. A hexadecameric copper(II) phosphonate Chandrasekhar Vadapalli, **Nagarajan Loganathan**, *Dalton Trans.* **2009**, 6712-6714.
20. Barrel- and crown-shaped dodecanuclear copper(II) cages built from phosphonate, pyrazole, and hydroxide ligands. Chandrasekhar Vadapalli, **Nagarajan Loganathan**, Clérac Rudalph, Ghosh Surajit, Senapati Tapas, Verma Sandeep. *Inorg. Chem.*, **2008**, *47*, 5347-5354. (4.3)

21. A distorted cubic tetranuclear copper(II) phosphonate cage with a double-four-ring-type core. Chandrasekhar Vadapalli, **Nagarajan Loganathan**, Clérac Rudolph, Ghosh Surajit, Verma S. *Inorg. Chem.*, 2008, 47, 1067-1073. (4.3)
22. Stannoxanes and phosphonates: New approaches in organometallic and transition metal assemblies. Chandrasekhar Vadapalli, Gopal Kandasamy, **Nagarajan Loganathan**, Sasikumar, Palani, Thilagar Pakkirisamy. *J. Chem. Sci.* 2006, 118, 455-462.
23. Mononuclear metal phosphinates with ancillary pyrazole ligands. Synthesis and X-ray crystal structures of $[M(\text{Ph}_2\text{PO}_2)_2(3,5\text{-DMPZ})_2]$ (M = Co, Zn) Chandrasekhar Vadapalli, Boomishankar Ramamoorthy, Sasikumar Palani, **Nagarajan Loganathan**, Cordes A. *Zeitschrift für Anorganische und Allgemeine Chemie*, 2005, 631, Pages 2727-2732.
24. A new structural form for a decanuclear copper(II) assembly. Chandrasekhar Vadapalli, **Nagarajan Loganathan**, Gopal Kandasamy, Baskar Viswanathan, Kögerler Paul. *Dalton Trans.* 2005, Pages 3143-3145.