



Professor Dr. M. Palaniandavar
Professor of Eminence

Contact

Address : Department of Chemistry
Bharathidasan University
Tiruchirappalli – 620 024
Tamil Nadu, INDIA

Employee Number : 159

Date of Birth : 05-06-1951

Contact Phone (Office) : +91 431 2407043

Contact Phone (Mobile) : +91 9443644758

Contact e-mail(s) : palaniandavar@bdu.ac.in, palanim51@yahoo.com

Academic Qualifications: M.Sc. Ph.D. Cert in German

Teaching Experience: 45 Years

Research Experience: 45 Years

Areas of Research

Bioinorganic Chemistry of DNA, Copper, Iron and Nickel - Activation of Molecular Oxygen - Study of Structure and Bonding in Enzyme Models using EPR, Electronic and Fluorescence Spectroscopy - Electron Transfer in Model Compounds - Electrochemistry and Bio-inspired Catalysis in Organized Assemblies - Metals in Medicine – Metal-DNA Interaction – Metal-based Anticancer Agents.

Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	Ph.D.	26	01
	M.Phil.	20	Xx
Project	PG	50	Xx

Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals
180	21	10	30	3

Cumulative Impact Factor (as per JCR) :	~500(Total)
h-index :	45
i10 index :	107
Total Citations :	6800

Funded Research Projects

Completed Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	CSIR Emeritus Scientist	2016	2019	Novel Mixed Ligand Copper(II) Complexes of Antibacterial Drugs with Diimines: Chemical Nuclease, Protease and Anticancer Activities and Structure-Activity Relationship	Rs 27.0 Lakhs
2.	CSIR	2013 - 2016	2013 - 2016	CSIR Major Project: Metals in Medicine: Mixed Ligand Copper(II) Complexes of Diimines as Chemical Nuclease and Protease and their Anticancer activities	Rs 28.0 Lakhs
3.	DST Nano Mission	2011	2014	DST Nano Mission Project: Targeted Intracellular Delivery of Metal-based Anticancer Drugs Using Functionalized	Rs 160

	Project:			Monolayer Protected Gold Nanoparticles (MGNPs)	Lakhs
4.	DST Ramanna Fellowship	2010	2013	DST Ramanna Fellowship: 'Non-heme Iron Enzymes: Studies on Structural and Functional Models'	Rs 35.0 Lakhs
5.	Indo-French Major Project:	2009	2013	Indo-French Major Project: 'Biological peroxide sensing: The bacterial regulator PerR, Synthetic analogues and Biomimetic Study	Rs 115.0 Lakhs
6.	DST Ramanna Fellowship	2007	2010	DST Ramanna Fellowship: 'Dioxygen and Substrate Activation at Non-heme Iron Active Sites: Structural and Functional Models'	Rs 35.0 Lakhs
7.	CSIR Major Project –	2007	2010	CSIR Major Project - 'Interaction of Copper(II) Complexes with DNA: Study of Covalent Binding and DNA Cleavage'	Rs 10.5 Lakhs
8.	DST Major Project	2007	2010	DST Major Project: New Initiative in Bioinorganic Chemistry - 'Functional Models for Non-heme Monooxygenase Enzymes'	Rs 39.0 Lakhs
9.	DST	2004	2007	Invited Research Proposal – 'Modelling the Structure, Spectra and Reactivity of Metal Ion Sites in Certain Iron and Manganese–dependent Non-Heme Oxygenase Enzymes'	Rs 28.73 Lakhs
10.	BRNS Major Project	2004	2008	BRNS Major Project – 'Interaction of binuclear Ru(II) and Co(III) Complexes with DNA: Spectral and Electrochemical Studies'	Rs 12.0 Lakhs
11.	CSIR Major	2001	2004	CSIR Major Project – 'Spectral and Electrochemical Studies on DNA Binding of Ruthenium(II) and Cobalt(III) Complexes of	Rs 9.0

	Project			Substituted 1,10-Phenanthrolines'	Lakhs
12.	DST Major Project	2001	2004	DST Major Project – 'Activation of Molecular Oxygen: Synthesis, Structure, Spectra and Reactivity of Models For the Iron Sites in Certain Non-Heme Oxygenase Enzymes'	Rs 15.0 Lakhs
13.	UGC Research Award -	Granted Sep 1997	Not Available	UGC Research Award - 'DNA Binding of Ruthenium Complexes of Substituted 1,10-phenanthrolines: Will they induce B → Z Transformation in natural DNA?'	Rs 15.0 Lakhs
14.	DST Major Project	April 1997-	March 2001	DST Major Project - 'Activation of Molecular Oxygen: Synthesis, Structure, Spectra and Reactivity of Models for the Active Sites in Certain Copper Enzymes'	Rs 12.5 Lakhs
15.	CSIR Major Project –	June 1993	Oct 2000	CSIR Major Project - 'Copper and Ruthenium Complexes as Chemical Probes for DNA'	Rs 4.6 Lakhs
16.	DST Major Project -	March 1990 -	May 1996	DST Major Project - 'Ruthenium Complexes of Novel Ligands with Thioether, Benzimidazole and Phenolic Donors: Structure, Spectra and Reactivity'	Rs 4.5 Lakhs
17.	CSIR Major Project -	Oct 1987	Feb 1993	CSIR Major Project - 'Activation of Molecular Oxygen: Synthesis, Spectra and-Reactivity of Models for the iron site in Catechol Dioxygenases'	Rs 4.0 Lakhs
18.	UGC Major Project -	May 1988 -	Sep 1990	UGC Major Project - 'Synthesis and study of Model Compounds for Enzyme-Copper – Nucleic Acid Interaction'	Rs 1.0 Lakh
19.	DST Major		April	DST Major Project - 'Synthesis, Structure and Electron Transfer in Models for the Copper site of Blue Copper Proteins'	Rs 10.0

	Project -		1991	Total	Lakhs Rs 6.0 Crores
--	-----------	--	------	--------------	-------------------------------

Ongoing Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	SERB	Apr 02 2016	March 31, 2019	Biomimetic Diiron(III) and Bioinspired Dinickel(II) Complexes as Functional Models for Soluble Methane Monooxygenase (sMMO)	58 Lakhs

Distinctive Achievements / Awards /Honours

1. Fellow of Indian National Science Academy (**FNA**), **2014**
2. Member, Sectional Committee on Chemistry, INSA, 2014-17
3. **FASc**, Indian Academy of Sciences, 2004
4. Member, Sectional Committee on Chemistry, IASc, 2006-09
5. **FRSC**, Royal Society of Chemistry, 2009, United Kingdom.
6. **CRSI-Silver Medal**, conferred by Chemical Research Society of India for extensive and outstanding contribution to Research, **2013**.
7. **CRSI -Bronze Medal**, conferred by Chemical Research Society of India for outstanding contribution to Research, **2000**.
8. **DST Ramanna Fellowship**, Department of Science and Technology, New Delhi **2006-09; 2010-2013**
9. **Tamil Nadu Scientist Award, 1997**
10. Prof. Sanke Gowda Research Award, Mysore University, 1995

Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized: 40

A. Workshop/Symposia/Schools Organized

1. Co-organizer, as Honorary President, RSC(South), Symposium on **Inorganic Chemical Biology**, March 17-18, **2017**, Madurai Kamaraj University, Madurai 625 021.
2. *Convener*, Indo-French Centre, New Delhi sponsored **Indo-French Seminar** on "Bioinorganic Approaches to Current Health Problems", Pondicherry University,

Pondicherry, March 24 – 28, **2014**.

3. *Member*, National Organizing Committee, Organometallic Chemistry and Organic Synthesis: Highlights and New Perspectives (**OMCOS-2011**), North Eastern Hill University, Shillong, March 28 – 29, 2011.
4. *Member*, National Organising Committee, Chennai Chemistry Conference (**CCC-2011**), Indian Institute of Technology Madras, Chennai, Feb 11- 13, 2011:
5. *Member*, National Organising Committee, New Perspectives in Inorganic Chemistry, Indian Association for the Cultivation of Science, Kolkata, Dec 10 - 13, 2010.
6. *Member*, National Organising Committee, Symposium on Modern Trends in Inorganic Chemistry, (**MTIC**), Central University, Hyderabad, December 10 - 13, 2011.
7. *Member*, National Organising Committee, Asian Coordination Chemistry Conference, (**ACCC-3**), New Delhi, October 17 - 20, 2011
8. *Member*, National Organising Committee, National Symposium on Frontiers in Main-Group and Organometallic Chemistry, Department of Inorganic and Physical Chemistry, IISc, Bangalore, November 20, 2010.
9. *Member*, Local Organising Committee, MTIC, IITM, Chennai, Dec 2007.
10. *Convener*, Seventy First **Annual Meeting of Indian Academy of Sciences**, Bangalore, November 11-13, 2005.
11. *Co-Convener*, **DST Workshop on New Initiatives in Bioinorganic Chemistry, IISc**, Bangalore, October 20-22, 2005.
12. *Convener*, Second Regional CRSI Symposium in Chemistry under the auspices of CRSI Tiruchy-Madurai Local Chapter, Tiruchirappalli, January 7-8, 2005.
13. *Organizer*, National Symposium on **The Double Helix: "Fifty Years and Beyond"**, Jan 19 – 20, 2004.
14. *Local Convener*, Chemical Research Society of India Tiruchy-Madurai Local Chapter, 2003
15. *Organizer*, DST-sponsored **Winter School on Bioinorganic Chemistry**, Nov 25 – Dec 07, 2002.
16. *Organizer*, DST-PAC Meeting, Nov 25 - Nov 27, 2002.
17. *Organizer*, Group Monitoring Workshop on DST-Funded Projects in Inorganic Chemistry, Bharathidasan University, Oct 8-9, 1998.
18. *Local Convener*, Jawaharlal Nehru Centre's Frontier Lectures in Chemistry, Tiruchirappalli, Dec 16-18, 1998.
19. UGC Refresher Course on 'Advances in Inorganic Chemistry', November 1994.
20. *Co-organizer*, National Science Day Symposium, Bharathidasan University, Tiruchirappalli, Feb 28, 1987.
21. *Organizer*, National Symposium on 'New Materials' and **National Academy of Sciences Annual Meeting**, 1987.

B. Academy Lecture Workshops Organized and Lectures Delivered (18)

1. *Convener*, Indian Science Academies sponsored Lecture Workshop on "Emerging Trends in Chemistry", Gauhati University, Guwahati, November 08 - 10, 2018.
2. *Convener*, Indian Science Academies sponsored Lecture Workshop on "Emerging Trends in Chemistry", Periyar University, Salem, October 04 – 06, 2018.
3. *Convener*, Indian Science Academies sponsored Lecture Workshop on "Emerging Trends in Chemistry", VHNSN College, Virudhnagar, Sep 27 – 29, 2018.
4. *Convener*, Indian Science Academies sponsored Lecture Workshop on "Emerging Trends in Chemistry", Bharathidasan University, March 21 – 23, 2018.
5. *Convener*, Indian Science Academies sponsored Lecture Workshop on "Emerging Trends in

- Chemistry”, Bharathiyar University, Feb 15 – 17, 2018.
6. *Convener*, Indian Science Academies sponsored Lecture Workshop on “Emerging Trends in Chemistry”, Indian Institute of Technology Roorke, Roorke, March 08 - 10, 2018.
 7. *Convener*, Indian Science Academies sponsored Lecture Workshop on “Emerging Trends in Chemistry”, Bharathiyar University, Feb 15 – 17, 2018.
 8. *Convener*, Indian Science Academies sponsored Lecture Workshop on “Emerging Trends in Chemistry”, Lady Doak College, Madurai, March 09-11, 2017, Lady Doak College, Madurai 625 002, 2017.
 9. *Convener*, Indian Science Academies sponsored Lecture Workshop on “Emerging Trends in Chemistry”, St. Joseph’s College, Tiruchirappalli, Dec 14-16, 2015.
 10. *Convener*, Indian Science Academies sponsored Lecture Workshop on “Emerging Trends in Chemistry”, Mother Teresa Women’s University, Kodaikanal, April 04 – 05, 2014.
 11. *Convener*, Indian Science Academies sponsored Lecture Workshop on “Modern Trends in Chemistry”, Devanga Arts College, Aruppukottai, April 04 – 05, 2015.
 12. *Convener*, Indian Science Academies sponsored Lecture Workshop on “Modern Trends in Chemistry”, Nurul Islam University, April 04 – 05, 2014.
 13. *Convener*, Indian Science Academies sponsored Lecture Workshop on “Bioinorganic Chemistry and its Applications”, Madurai Kamaraj University, Madurai, Oct 28 – 30, 2012
 14. *Convener*, Indian Science Academies sponsored Lecture Workshop on “Emerging Trends in Chemical Sciences”, Central University of Tamil Nadu, Thiruvarur, Oct 21 – 23, 2012.
 15. *Convener*, Indian Science Academies sponsored Lecture Workshop on “Emerging Trends in Chemistry”, Queen Mary’s College, Chennai, Dec 02 – 04, 2011
 16. *Convener*, Indian Science Academies sponsored Lecture Workshop on “Frontiers in Bioinorganic Chemistry”, Centre for Bioinorganic Chemistry, Bharathidasan University, Tiruchirappalli, February 25-27, 2010.
 17. *Convener*, Indian Science Academies sponsored Lecture Workshop on “Frontiers in Chemistry”, H. K. R. College, Uthamapalayam, March 28-29, 2009.
 18. *Convener*, Indian Science Academies sponsored Lecture Workshop on “Frontiers in Chemistry”, National College, Tiruchirappalli, March 13-14, 2009.
 19. *Convener*, Indian Science Academies sponsored Lecture Workshop on “Probing Electronic States in Molecules and Molecular Materials”, Bharathidasan University, Tiruchirappalli, September 24-27, 2008.

Events Participated (optional)

Conferences / Seminars / Workshops:

A. Invited Lectures in International Conferences

1. Fourth Asian Coordination Chemistry Conference, **ACCC-4**, Jeju Island, Korea, Nov 6-8, 2013, Synthesis, Structure and cytotoxicity of Ru(II) and Cu(II) Complexes.
2. Third Asian Coordination Chemistry Conference, **ACCC-3**, New Delhi, October 17 - 20, 2011, Alkane hydroxylation catalyzed by Diiron(III) Complexes of Tridentate 3N Ligands and Nickel(II) Complexes of Tridentate 4N Ligands.
3. 5th International Symposium on Bioorganometallic Chemistry (**ISBOMC-10**), **Ruhr-University of Bochum, Germany**, June 05-09, DNA and Protein Binding, Cleavage and Anticancer Activity of Organometallic (M = Ru(II), Rh(III), Ir(III) Arene Complexes.

4. *Keynote Address, Invited:* International Union of Materials Research Society (**IUMRS**) – International Conference in Asia (ICA), **Japan, Nagoya Institute of Technology**, Dec 10-11, 2008, Biological Molecular Devices for Oxygen Activation: Small Molecule Analogues for Non-heme Iron Enzymes.
5. Asian Biological Inorganic Chemistry Conference, **ASBIC IV, Jeju Island, Korea**, November 10-14, 2008, Mononuclear Iron(III) Complexes as Functional Models for Non-heme Catechol Dioxygenases.
6. Symposium on Medicinal Organometallic Chemistry, **St. Martin, Germany**, April 05, 2008. Studies on Non-covalent Binding and Anticancer Activities of Mixed Ligand Copper(II) and Ruthenium(II) Complexes of Diimines.
7. **European Science Foundation High Level Conference on Metal - Nucleic Acid Interaction, Athens, Greece**, Nov 12 - 17, 2006.

B. Invited Lectures in National Conferences/Symposia/Workshops (very recent)

1. *Session Chairman, Chemical Frontiers 2017*, Goa, Aug 2017.
2. *Invited Lecture, 'Structures, DNA Binding and Cleavage and Cytotoxicity of Mixed Ligand Copper(II) Complexes'*, Symposium on **Inorganic Chemical Biology**, March 17-18, **2017**, Madurai Kamaraj University, Madurai 625 021.
3. *Invited Key Note Lecture, 'Metal-based Anticancer Drugs: Structure-Activity Relationship for Simple and Mixed Ligand Copper(II) Complexes of Diimine Co-ligands,'* Fifth Symposium on Advanced Biological Inorganic Chemistry', **AsBIC, IACS, Kolkata**, Jan 7-11, **2017**.
4. *Invited Lecture, Alkane Hydroxylation by Nickel-oxo Complexes*, **MTIC, Jadavpur University, Kolkata, 2015**.
5. *Inaugural Lecture and Invited Lecture: SERB Symposium on Bioinorganic Chemistry*, Sowdambika College of Engineering, Aruppukottai, **2016**.
6. *Invited Lecture, National Symposium on Recent Advances in Chemistry (NSRAC - 2013)* Pondicherry University, Pondicherry, March 22 – 23, 2013. Metal-based Anticancer Drugs: Anticancer Activities of Simple and Mixed Ligand Metal(II) Complexes of Diimines.
7. *Plenary Lecture, International Conference on Biological Inorganic Chemistry (ICBIC-2013)*, Periyar University, Salem, Feb 20 - 22, **2013**. Biomolecular Devices for Dioxygen activation: Synthetic Models for Non-heme Iron Oxygenases.
8. *Silver Medal Lecture, 15th CRSI National Symposium in Chemistry*, Banaras Hindu University, Varanasi, Feb 1 - 3, **2013**. Metal-based Anticancer Drugs: Anticancer Activities of Simple and Mixed Ligand Transition Metal(II) Complexes of Diimines.

C. Endowment Lectures (Selected)

1. Professor V. Baliah Endowment Lecture, Annamalai University, Annamalai 2006
2. Professor C. Srinivasan Endowment Lecture, M. K. University, Madurai 2006
3. Professor C. Natarajan Endowment Lecture, 2002, 2009
4. Professor C. Natarajan Endowment Lecturer, M. K. University, Madurai, 1995

D. Guest Lectures – Abroad (Selected)

1. *Guest Lecture* delivered in Advanced Imaging Centre, University of Dallas, South Campus USA; 'Mixed Ligand Copper(II) Complexes Copper(II), DNA Interaction and Cytotoxicity,' Sep 2016.

2. *Guest Lecture* delivered in Drexel University, Philadelphia, USA; ‘Mixed Ligand Complexes Copper(II), DNA Interaction and Cytotoxicity,’ June 2015.
3. *Guest Lecture*, delivered in Grenoble National Laboratory, **Grenoble**, and Universities in **France**, Functional Models for Extradiol-cleaving Non-heme Catechol Dioxygenase,’ 2011.
4. *Guest Lecture*, delivered in University of Minnesota, Minneapolis, **USA**, ‘In Search of Functional Models for Extradiol-cleaving Non-heme Catechol Dioxygenase,’ August 21, 2007.
5. *Guest Lecture*, delivered in National University of Singapore, **Singapore**, ‘Mononuclear Iron(III) Complexes as Functional Models for Non-heme Catechol Dioxygenase,’ March 2006.
6. *Guest Lectures*, delivered in University of **Leeds**, Leeds, UK; University of **Neuchatel**, Switzerland, University of Leiden, **Leiden**, The Netherlands, ‘Mononuclear Iron(III) Complexes as Functional Models for Non-heme Catechol Dioxygenase,’ and Interaction of Cu(II) and Ru(II) Complexes with DNA: Effect on DNA Conformations’, Mar-Apr 2005.
7. *Guest Lectures* delivered in various Universities in Japan during May-June 2003: **Chuo** University, Tokyo, **Osaka** University, Osaka, **Nagoya** University, Nagoya, **Nagoya Institute of Technology**, Nagoya, Japan on various topics of Bioinorganic Chemistry of Iron, Copper and DNA’.
8. *Guest Lectures* delivered in Drexel University, Philadelphia, USA; ‘Iron(III) Complexes of Tripodal Ligands as Models for Certain Iron-Tyrosinate Proteins’. April-June 2001; INSA-RS Visit.
9. *Guest Lectures* delivered in various Universities in United Kingdom: University of **Leeds**, University of **York**, University of **Cambridge**, April-June 2001 INSA- RS Visit and during March -April 2001.
10. *Guest Lectures* delivered in various Universities in Germany: University of **Saarbrücken**, University of **Duisburg**, University of Konstanz, University of Dortmund. ‘Bioinorganic Chemistry of Iron, Copper and DNA’.
11. *Guest Lecture*, University of **Leiden**, The Netherlands, Dec 2, 1996 during 1996 INSA Exchange Visit. ‘Copper and Ruthenium Complexes as Probes for DNA’
12. *Guest Lecture*, University of **Duisburg**, Duisburg, Germany, Sep 1995. ‘Copper(II) Complexes of Tripodal Ligands as Models for Certain Iron Tyrosinate Proteins’.
13. *Guest Lecture*, **Tokyo Institute of Technology**, Yokohama, Japan 1993. ‘Synthetic Models For Blue Copper Proteins’.
14. *Guest Lecture*, Chuo University, Tokyo, Japan; ‘Electrochemical Investigation of interaction of Metal Complexes with CT DNA’, 1993.

D. Other Training Programs (very recent)

1. INSPIRE Camps, Lectures, VHNSN College, Virudhunagar, Nehru Memorial College, Puthanambpatti, 2018

Overseas Exposure / Visits

- | | |
|---|---|
| 1. Instructor Post-doctoral Fellow | : Drexel University, Philadelphia, USA
(Sep 1983 - Nov 1985) |
| 2. Visiting Fellow (NATO Project) | : Leiden University, Leiden, The Netherlands |
| 3. Visiting Scientist | : Drexel University, Philadelphia, USA
May - Aug 1989 |
| 4. Visiting Professor (JSPS)
(Long Term) | : Chuo University, Tokyo, Japan
May 1993 - April 1994 |

- | | |
|--|--|
| 5. Visiting Professor (DFG-INSA) | : University of Saarbrucken, University of Duisburg, Germany, 1996 |
| 6. Visiting Professor (RS-INSA) | : University of Leeds, United Kingdom
February - May 2001 |
| 7. Visiting Professor (DST-JSPS) | : Chuo University, Tokyo, Japan
March 2003 - May 2003 |
| 8. Visiting Professor | : Academia Sinica, Taipei, Taiwan |
| 9. Visiting Professor (INSA-DFG) | : University of Bochum, Germany
March-April, 2008 |
| 10. DAAD Research Visit | : University of Bochum, Germany
June-July, 2010 |
| 11. Visiting Scientist
(DST-Ramanna Fellowship) | : Trinity College, Hartford, USA
Dec – Jan, 2010-2011 |
| 12. Visiting Scientist
IFCPAR collaborative Project | : Grenoble National Laboratory, France
June – July 2011; May – June 2013xxx |

Membership in

Professional Bodies

1. **Life Member, CRSI** (Chemical Research Society of India, Bangalore)
2. **Convener**, Trichy-Madurai Local Chapter of CRSI
3. **Hon. President**, Royal Society of Chemistry (South)
4. Life member, SAEST, Karaikudi
5. Member: American Chemical Society
6. Fellow: Royal Society of Chemistry

Editorial Board

1. Journal of Chemical Sciences, Indian Academy of Sciences till 2012
2. Open Inorganic Chemistry Journal
3. Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry

Advisory Boards

1. Member, **DST PAC** on Inorganic Chemistry, 2003-05, 2006-2009
2. Member, CSIR-NET Committee, 1996-2013
3. Member, KVPY, Committee for Chemistry, 2012-15
4. Member, PAC for **Fast Track Young Scientist Scheme** DST, Department of Science and Technology, New Delhi, 2012–15
5. Invited Member, First meeting of **SERB PAC** for Inorg and Physical Chem, IITB, 2015.
6. Member, Meeting of **SERB PAC** for **FT YSS**, Bharathidasan University, 2017.
7. UGC, SAP, Advisory Member, Department of Analytical Chemistry, University of Madras.

8. Member, UGC Committee, Centre for Excellence, University of Karnataka; Sardar Vallab University, Gujarat. 2015
9. Member, Review Committee, Chemistry Division, BARC, Mumbai 2015

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

1. Standing Committee on Academic Affairs, Bharathidasan University, Four terms during 1985-2011
2. Academic Council, Member, many Autonomous Colleges in BARD area
3. Board of Studies PG Colleges in BARD area, REC

Resource persons in various capacities

Number of Invited / Special Lectures delivered: more than 50; very recent ones given

1. Resource Person in Refresher Course, M. K. University, March 2018
2. Resource Person in Academy sponsored Refresher Course, SBK College, Aruppukottai, Aug 2018.

Others

1. Articles published in Newspapers / Magazines : xx
2. Products developed : xx
3. No. of PhD Thesis evaluated : 21
4. No. of PhD Public Viva Voce Examination conducted : 20
5. Sequences submitted in GenBank

**Social Interests and Initiatives / Articles in News papers etc can also be included

Recent Publications (2012-18)

1. M. Ganeshpandian, M. Palaniandavar, M. Amsaveni, S. K. Ghosh, A. Riyasdeen, M. A. Akbarsha, (2018) Ruthenium(II)–arene Complexes of Diimines: Effect of Diimine Intercalation and Hydrophobicity on DNA and Protein Binding and Cytotoxicity, *App. Org. Met. Chem.*, **32**, 4154. (IF, 3.6)
2. N. Anitha, N. Saravanan, T. Ajaykamal, E. Suresh and M. Palaniandavar, (2019) Catecholase Activity of Mononuclear Copper(II) Complexes of Tridentate Ligands in Aqueous and Aqueous Micellar Media: Influence of Stereoelectronic Factors on Catalytic Activity, *Inorg. Chim. Acta*, **485**, 98-11. (IF, 2.2)
3. M. Ganeshpandian, M. Palaniandavar, M. Amsaveni, S. K. Ghosh, A. Riyasdeen, M. A. Akbarsha, (2017) Ruthenium(II)–arene Complexes of Diimines: Effect of Diimine Intercalation and Hydrophobicity on DNA and Protein Binding and Cytotoxicity, *App.*

Org. Met. Chemistry, 32, 4154. (IF, 3.6)

4. R. Loganathan, M. Ganeshpandian, N. S. P. Bhuvanesh, M. Palaniandavar, M. Amsaveni, S. K. Ghosh, A. Riyasdeen, and M. A. Akbarsha, (2017) DNA and Protein Binding, Double-strand DNA Cleavage and Cytotoxicity of Mixed Ligand Copper(II) Complexes of the Antibacterial Drug Nalidixic Acid, *J. Inorg. Biochem.*, 174, 1-13. (IF, 3.6)
5. M. Sankaralingam, M. Palaniandavar and V. Prabha, (2017) Novel Nickel(II) Complexes of Sterically Modified N4 Ligands: Effect of Ligand Stereoelectronic Factors and Solvent of Coordination on Nickel(II) Spin-state and Catalytic Alkane Hydroxylation, *Dalton Trans.*, 46, 7181. (IF, 4.2)
6. M. Sankaralingam, V. Prabha, and M. Palaniandavar, 2016, Nickel(II) Complexes of linear N4 Ligands for Alkane Hydroxylation using *m*-CPBA as an Oxidant: Effect of Cyclic vs Acyclic Diamine, *Dalton Trans.*, 45, 11422-11436. (IF, 4.2)
7. M. Balamurugan, E. Suresh and M. Palaniandavar (2016) Non-heme μ -Oxo- and bis(μ -carboxylato)-bridged diiron(III) complexes of a 3N ligand as catalysts for alkane hydroxylation: stereoelectronic factors of carboxylate bridges determine the catalytic efficiency, *Dalton Trans.*, 2016, 45, 11422-11436. (IF, 4.2)
8. T. Khamrang, R. Kartikeyan, M. Velusamy, V. Rajendiran, R. Dhivya, M. A. Akbarsha, and M. Palaniandavar, (2016) Synthesis, Structures, and DNA and Protein Binding of Ruthenium(II)-*p*-Cymene Complexes of Substituted Pyridylimidazo[1,5-*a*]pyridine: Enhanced Cytotoxicity of a Complex with Ligand-appended Phenothiazine a Prototypical Pharmaceutical Lead Molecule, *RSC Advances*, 115, 114143-114158. (IF, 3.1)
9. Makoto Chikira, Chew Hee Ng and Mallayan Palaniandavar (2015), Interaction of DNA with Simple and Mixed Ligand Copper(II) Complexes of 1,10-Phenanthrolines as Studied by DNA-Fiber EPR Spectroscopy, *Int. J. Mol. Sci.*, 16, 22754. (IF, 3.9)
10. R. Dhivya, P. Jaividhya, A. Riyasdeen, M. Palaniandavar, G. Mathan, M. A. Akbarsha (2015), In vitro antiproliferative and apoptosis-inducing properties of a mononuclear copper(II) Complex with dppz ligand in two genotypically different breast cancer cell lines, *Biometals*, 28, 929. (IF, 2.5)
11. Jaividhya P, Ganeshpandian M, Dhivya R, Akbarsha M A and Palaniandavar M (2015) Fluorescent Mixed Ligand Copper(II) Complexes of Anthracene-appended Schiff Bases: Studies on DNA Binding, Nuclease Activity and Cytotoxicity, *Dalton Trans.*, 44, 11997. (IF, 4.2)
12. Loganathan R, Ramakrishnan S, Ganeshpandian M, Bhuvanesh N and Palaniandavar M, Riyasdeen, A and Akbarsha, M A (2015) Mixed Ligand Copper(II) Dicarboxylate Complexes: Role of Co-ligand on DNA Binding and Double-strand DNA Cleavage and on Protein Binding and Cytotoxicity, *Dalton Trans.*, 44, 10210. (IF, 4.2)
13. Balamurugan M, Prabha V and Palaniandavar M (2014) Iron(III) Complexes of Tripodal Tetradentate 4N Ligands as Functional Models for Catechol Dioxygenase Enzymes: Electronic vs Steric effect on Extradiol Cleavage, *Dalton Trans.*, 43, 14653. (IF, 4.2)

14. Sankaralingam, M, Saravanan, N, Anitha N, Suresh, E, and Palaniandavar M (2014) Biomimetic Iron(III) Complexes of Facially and Meridionally Coordinating Tridentate 3N Ligands: Tuning of Regioselective Extradiol Dioxygenase Activity in Organized Assemblies, *Dalton Trans.*, **43**, 6828. (IF, 4.2)
15. Loganathan, R, Ramakrishnan, S, Suresh, E, Palaniandavar, M, Riyasdeen, A and Akbarsha, M A (2014) Mixed Ligand μ -Phenoxo-bridged Dinuclear Copper(II) Complexes With Diimine Co-ligands: Efficient Chemical Nuclease and Protease Activities and Cytotoxicity, *Dalton Trans.*, **43**, 6177. (IF, 4.2)
16. Sankaralingam M and Palaniandavar M (2014) Tuning the Olefin Epoxidation by Manganese(III) Complexes of Bisphenolate Ligands: Role of Lewis basicity of Ligands on Reactivity, *Dalton Trans.*, **43**, 538. (IF, 4.2)
17. Ganeshpandian M, Loganathan R, Suresh E, Riyasdeen A, Akbarsha M A and Palaniandavar M (2014) New Ruthenium(II) Arene Complexes of Anthracenyl-appended Diazacycloalkanes: Effect of Ligand Intercalation and Hydrophobicity on DNA and Protein Binding and Cleavage and Anticancer Activity, *Dalton Trans.*, 2014, **43**,1203. (IF, 4.2)
18. Sankaralingam, M, Balamurugan, M, Prabha, V, Suresh, C, Palaniandavar, M, (2014) Nickel(II) Complexes of Tripodal 5N Ligands as Catalysts for Alkane Hydroxylation using m-CPBA as Oxidant: A Combined Experimental and Computational Study, *Chem. Eur. J.*, **20**, 11346. (IF, 6.2)
19. Rajarajeswari C, Ganeshpandian M, Palaniandavar M, Riyasdeen A and Akbarsha M A (2014) Mixed Ligand Copper(II) Complexes of 1,10-Phenanthroline with Tridentate Phenolate/ Pyridyl/(Benz)imidazolyl Schiff Base Ligand: Covalent vs Non-covalent DNA Binding and Cleavage and Cytotoxicity, *J. Inorg. Biochem.*, **140**, 255. (IF, 3.6)
20. Ganeshpandian M, Ramakrishnan S, Palaniandavar M, Riyasdeen A and Akbarsha M A (2014) Mixed Ligand Copper(II) Complexes of 2,9-Dimethyl-1,10-phenanthroline: Tridentate 3N Primary Ligands Determine DNA Binding and Cleavage and Cytotoxicity, *J. Inorg. Biochem.*, **140**, 202-212. (IF, 3.6)
21. Saravanan N, Sankaralingam M and Palaniandavar M (2014) Bioinspired Manganese(II) Complexes of Tetradentate 4N Ligands for Catalytic Olefin Epoxidation: Effect of Nucleophilicity of Peroxo Complexes on Reactivity *RSC Advances.*, **4**, 12000. (IF, 3.1)
22. Sankaralingam M and Palaniandavar M (2014) Diiron(III) Complexes of Tridentate 3N Ligands as Functional Models for Methane Monooxygenases: Effect of Capping Ligand on Hydroxylation of Alkanes, *Polyhedron*, **67**, 171. (IF, 1.9)
23. Rajarajeswari C, Loganathan R, Palaniandavar M, Suresh E, Riyasdeen A and Akbarsha M A (2013) Copper(II) complexes with 3N and 2NO donor ligands: Synthesis, Structures and Chemical Nuclease and Anticancer Activities, *Dalton Trans.*, **42**, 8347. (IF, 4.2)
24. Sankaralingam M, Prabha V, Suresh E, Palaniandavar M (2013) Mixed Ligand Nickel(II) Complexes as Catalysts for Alkane Hydroxylation using m-Chloroperbenzoic Acid as Oxidant, *Inorg. Chim. Acta*, **407**, 98. (IF, 2.2)

25. Ganeshpandian M, Loganathan R, Ramakrishnan S, Riyasdeen A, Akbarsha M A and Palaniandavar M (2013) Interaction of Mixed Ligand Copper(II) Complexes with CT DNA and BSA: Effect of Primary Ligand Hydrophobicity on DNA and protein Binding and Cleavage and Anticancer activities, *Polyhedron*, 52, 929-938. **(Invited Article for Alfred Werner Special Issue, The most downloaded article from SciVerse ScienceDirect & recognized as "Top-10 most cited articles for the year 2013-2014")** (IF, 1.9)