

CURRICULUM VITAE

Dr. M. UMADEVI

Office:

**Department of Chemistry
Nehru Memorial College
Puthanampatti, Trichy -07.**

Residence:

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Theni – 625 533,
Tamil Nadu,
INDIA.**

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SUMMARY AND OBJECTIVE

- Experienced in synthesis of organic ligands and inorganic metal complexes.
- Experienced in Cancer cell line studies, MTT Assay and Antimicrobial (bacteria, virus & fungi) studies using well diffusion technique.
- Experienced in analyzing the DNA binding, and Gel Electrophoretic studies.
- Experienced in structural elucidation of organic compounds as well as inorganic complexes with spectral and analytical techniques such as NMR (^1H & ^{13}C), IR, UV-Vis, Mass, EPR, XRD, CV and thermal studies.
- Experienced in Computational Chemistry, Molecular modeling, DFT, HF and theoretical calculation.

ACADEMIC QUALIFICATIONS

Ph. D., (Bioinorganic Chemistry)	Madurai Kamaraj University, Madurai. India	2005-2010
M.Phil., (Bioinorganic Chemistry)	Madurai Kamaraj University, Madurai. India	2007-2008
M.Sc., (General Chemistry)	Bharathidasan University, Trichirapalli. India. (K.M.College, Adirampattinam)	2000-2002
B.Sc., (General Chemistry)	Madurai Kamaraj University, Madurai. India (H.K.R.H. College, Uthamapalayam)	1993-1996

PROFESSIONAL AND RESEARCH EXPERIENCE

Ph.D Research (2005 - 2009)

Title: “Physico-chemical and Biological Studies on Transition Metal Complexes”.

(Supervisor: Prof. A. Ramu, Madurai Kamaraj University, Madurai.)

M.Phil., Project (2007-2008)

Title: “Synthesis, structural characterization and antimicrobial activities of 2-chloroquinoline-3-formylthiosemicarbazone and its transition metal complexes”.

(Supervisor: Prof. A. Ramu, Madurai Kamaraj University, Madurai.)

M.Sc., Project (2000-2002)

Title: “Synthesis, characterization and antimicrobial studies of β -nitrostyrene derivatives”.

(Supervisor: G.A. Dhameem, Khadir Mohideen College, Adirampattinam.)

HONORS AND AWARDS

- Meritorious Senior Research fellow in Rajiv Gandhi National Fellowship – UGC Scheme from September 2005 to Sep 2009

TEACHING EXPERIENCE

S.No	Position	Duration/Years	Institute/Board
1	Assistant Professor	Feb.2011- June.2012/ 1Y 5M	Sethu Institute of Technology, Virudhunagar
2	Assistant Professor	July-2012-Till date	Nehru Memorial College, Thiruchirappalli

TECHNICAL EXPERTISE IN THE FIELDS OF

Bioinorganic Chemistry of metal complexes
Cancer cell line and antimicrobial studies
Nano Chemistry
Catalytic studies
Synthetic organic chemistry
Computational chemistry

INSTRUMENTS HANDLED

JASCO V-550 UV-Vis spectrophotometer,
JASCO FT-IR-410 spectrophotometer
BAS CV-50W, 27W

COMPUTER SKILLS

Diploma in Computer Applications
MS Office, Chem Draw, Jasco, Origin, Gaussian 03

LIST OF PUBLICATION

See Annexure I
See Annexure II

MAJOR RESEARCH PROJECT

See Annexure III

PERSONAL

Date of Birth : 20-05-1976
Marital status : Married
Nationality : Indian
Languages known : Tamil and English
Permanent Address : **16-13/5, Nattanmai Street,
Uthamapalayam,
Theni – 625 533,
Tamil Nadu,
INDIA.**

RESEARCH ACTIVITIES

		Completed	On Going
No. of M.Phil	11	11	--
No. of Ph. D	04	----	04

REFERENCES

- 1. Prof.A.Ramu,**
Head & Chairperson,
Department of Inorganic Chemistry,
School of Chemistry,
Madurai Kamaraj University,
Madurai -21
Email: ramumku@yahoo.co.in
Mobile: 9442623835
- 2. Prof. M.S.Ramachandran,**
Head, Dept. of Physical Chemistry,
School of Chemistry,
Madurai Kamaraj University,
Madurai -21
Email: ramachandran_mku@yahoo.co.in
Mobile : 9894223686
- 3. Dr. B.Kadalmani,**
Assistant Professor,
Dept. Of Animal Sciences,
School of Life Sciences,
Bharathidasan University,
Trichirappalli – 24
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Orientation/ Refresher/Other Courses attended

Name of the Course	Academic Staff College, University	Duration in Days	Period (Mention dates)	
			From	To
Orientation Course	UCG -Academic Staff College, Madurai Kamaraj University, Madurai	28 days	05.11.2013	02.12.2013
Refresher Course on Chemistry	UGC-Human Resource Development Centre, Madurai Kamaraj University, Madurai	21 days	02.11.2016	22.11.2016
Refresher Course on Chemistry	UGC-Human Resource Development Centre, Pondichery University, Pondichery.	14 days	15.07.2021	28.07.2021
Online Short-Term Course on E-Content Development	UGC-Human Resource Development Centre Gujarat University, Ahmedabad	7 days	31/05/2021	06/06/2021
Short Term Program on Online Tools for Teaching-Learning	UGC-Human Resource Development Centre UNIVERSITY OF HYDERABAD	7 days	21.06.2021	26.06.2021

Annexure – I
List of Publications

S.No.	Journal Name	Volume/ Year	Title of the Paper	Impact Factor
1	Inorganic Chemistry Communications	Vol.134 pp 108991 (2021)	Insights of pharmacological effects on 2-aminopyrazine / pyrimidine derivative and their palladium complexes: Synthesis and biochemical perspective	2.49
2	Bioorganic and Medicinal Chemistry Letters	Vol.30 pp27593 (2020)	Effects on anti-inflammatory, DNA binding and molecular docking properties of 2-chloroquinolin-3-yl-methylene-pyridine/pyrazole derivatives and their palladium(II) complexes	2.82
3	Journal of Molecular Structure	Vol. 1221 pp 128778-784, (2020)	Structural, cytotoxicity and molecular docking studies of some quinoline schiff bases and their Pd(II), Mn(II) and Ru(II) complexes	3.19
4	Inorganica Chimica Acta	Vol. 492 pp 48-59, (2019)	Synthesis of coumarin derivatives and its Ru(II) complexes encompassing pyrazole ring as a potent antidiabetic agents – A biochemical perspective	2.54
5	Journal of Molecular Structure	Vol. 1176 pp 591-604, (2019)	Paddle wheel manganese carboxylate metal organic frame work as a host for hydrophilic molecules	3.19
6	Journal of Molecular Structure	Vol. 1157 pp 201-209, (2018)	Photo-degradation of CT-DNA with a series of carbothioamide ruthenium (II) complexes - Synthesis and structural analysis	3.19
7	Journal of Molecular Structure	Vol. 1138 pp 208-214, (2017)	Molecular characterization, DFT and TD-DFT calculations of morpholinium tetra chloropalladate (II)	3.19
8	Journal of Ad.App.Sci.Res	Vol. 1-9 pp 62-67, (2017)	Synthesis, Characterization, and Biological Evaluation of Some 3d-Metal Complexes of Schiff Base Derived from Sulfonamide Drug	1.42
9	American Scientific Publishers Materials Focus	Vol. 5, pp. 1–9, 2016	Light Induced Synthesis of Sr/CdSe Nanocomposite for the Highly Synergistic Photodegradation of Methylene Blue Dye Solution	1.21
10	Int. J. Adv.Res.	Vol. 1(5) pp 414-424, (2013)	Synthesis, crystal structure, spectral characterization, antiproliferative / DNA interaction studies of monomeric ruthenium (II) manganese (II) and palladium (II) complexes of a novel 2-benzoylhydrazinecarbothioamide	1.51
11	Am. J. PharmTech Res.	Vol. 3(3) pp 416-429, (2013)	Spectral Investigation, Structural Assignments and Anti-Tumor Activities of Pyrimidine Based Transition Metal (II) Complexes	0.43
12	Am. J. PharmTech Res.	Vol. 3(3) pp 512-529, (2013)	Synthesis, Spectral Characterization, Antimicrobial Screening and DNA Studies of Transition metal complexes of Cu(II), Co(II), Ni(ii) and Zn(II) with Heterocyclic Triazol based derivative	0.43
13	IOSR Journal of Engineering (IOSRJEN)	Vol. 3(3) pp 18-27, (2013)	Synthesis, characterization and biological activities of transition metal chelates of 2-aminothiazole-derived Mannich bases	0.56
14	International Journal Of Engineering And Science	Vol. 2(12) pp 16-25, (2013)	Synthesis, Spectral Characterisation Biological Screening and DNA Studies of 2-(5-Mercapto-1, 3, 4-Oxadiazol-2-yl) Phenol Transition Metal (II) Complexes	0.54

Annexure – II
List of Paper presented in Conferences/Seminars/Workshops

Sl.No	National (NC) / International (INC)	Name of the event	Places/dates	Title of paper presented
1	INC	<i>International Conference on Recent Trends in Chemistry and Biosciences (IC-RTCB2019)</i>	<i>Madurai Kamaraj University, Madurai. May 16-17, 2019</i>	Visible Light Photo catalytic Degradation of Methylene Blue by Using Palladium Doped Indium oxide Nano Flowers
2	INC	<i>International Conference on Recent Trends in Chemistry and Biosciences (IC-RTCB2019)</i>	<i>Madurai Kamaraj University, Madurai. May 16-17, 2019</i>	Structural Investigation And Dna Binding Affinities Of Tridendate N, N, S Donor System Of Schiff Bases Derived From Creatinine
3	INC	<i>International Conference on Recent Trends in Chemistry and Biosciences (IC-RTCB2019)</i>	<i>Madurai Kamaraj University, Madurai. May 16-17, 2019</i>	Structural Elucidation and Biological Activities of a Series of Palladium(II) Complexes Derived from 2-Chloro-6-methoxy-3-quinolinecarboxaldehyde Schiff Bases
4	INC	<i>International Conference on Recent Developments in Arts, Science, Agriculture and Environment (IC-RDASAE)</i>	<i>Saraswathi Narayanan College @ Kuala Lumpur, Malaysia. May. 5-8, 2017</i>	Enhanced photocatalytic Activities and Stability of W/CdS nanorods.
5	INC	<i>International Conference on Renewable Energy (ICCRE-2016)</i>	<i>Bishop Heber College, Tiruchirappalli. Feb. 25-26, 2016.</i>	Synthesis, Characterisation and biological evaluation of some 3d- metal complexes of Schiff base derived from sulfonamide drugs
6	NC	<i>National Seminar on Recent Developments in Building Materials and Technologies (RDBMT-2015)</i>	<i>The Gandhigram Rural Institute-Deemed University, Gandhigram, Dindigul. March. 27-28, 2015</i>	<i>Photocatalytic Degradation of Industrial Waste with MnO₂ nanoparticles.</i>
7	INC	<i>58th DAE Solid State Physics Symposium.</i>	<i>Thapar University, Patiala. Dec. 17-21, 2013.</i>	<i>Synthesis of CdS Nanoparticles for photocatalytic Application of Methylene blue degradation</i>
8	NC	<i>National Conference on Emerging Trends in Green Technology</i>	<i>Sriram Engineering College, Veppampattu, Chennai. Sept. 13-14, 2012.</i>	Metal Halide Salts of Protonated Morpholine: Synthesis, Crystal Structure, Molecular Characterisation, DFT and TD-DFT Calculations.
9	INC	<i>International</i>	<i>Mahatma Gandhi</i>	Synthesis, spectral characterization, DNA-

		<i>Conference on Membranes; Biological and Environmental Applications (ICM - 2011)</i>	<i>University, Kottayam, Kerala. Sept. 16-19. 2011.</i>	binding, cleavage and Anti-cancer studies of novel Ru(II) complexes with 6-chloro, 6-methoxychromonethiosemicarbazone
10	INC	<i>Recent trends in bio-inorganic chemistry</i>	<i>V.H.N.S.N. College, Virudhunagar. Feb. 17, 18 -2011</i>	Metal halide salts of protonated morpholine: synthesis, crystal structure, molecular characterisation, DFT and ab initio Hartree-Fock calculations.
11	INC	<i>International conference on green Chemistry and Sustainable Environments (GCASE- 2010)</i>	<i>Holy Cross College, Thiruchirappalli July.7-8. 2010</i>	Metal Complexes Of Pyrimidine Derived Ligands–Syntheses, Characterization X-Ray Crystal Structures And Anticancer Activities Of Cu(Ii), Cd(Ii) And Pd(Ii) Complexes Of Mannich Base Ligands
12	NC	<i>Recent Advances in Inorganic and Nanochemistry</i>	<i>Madurai Kamaraj University, Madurai. March. 29-30, 2010.</i>	Synthesis and Structural Characterisation studies of 5-(phenyl-piperidin-1-yl-methyl)-pyrimidin-2,4,6-trione derivative and their metal complexes as potential anticancer agents
13	NC	<i>National conference on Recent Advances in Metalloorganic chemistry (RAMC- 2008)</i>	<i>Periyar University, Salem. Oct. 16, 17 - 2008</i>	Studies on new pyrimidine base-metal complexes
14	NC	<i>National Conference on Recent Advances in the study of transition metal complexes (RAITS-TMC-08)</i>	<i>V.H.N.S.N.College, Virudhunagar. Aug. 13-14. 2008</i>	Synthesis and characterization studies on N'-Carbamothioylbenzohydrezonoyl chloride and its Transition metal complexes
15	NC	<i>National Conference on Recent Advances in the study of transition metal complexes (RAITS-TMC-08)</i>	<i>V.H.N.S.N.College, Virudhunagar. Aug. 13-14. 2008</i>	Synthesis, spectral characterization of 2-chloroquinoline-3-formylthiosemicarbazone and their transition metal complexes
16	NC	<i>National Conference on Frontiers in Chemistry Research (NCFRCR-08)</i>	<i>Holy Cross College, Tiruchirapalli. Dec. 5 - 2008</i>	Synthesis, spectral and X-ray diffraction studies on novel Knoevenagel product of Barbiturates and its Transition metal complexes

Annexure – III
Conference/Seminar/Workshop Participated

Sl.No	National (NC) / International (INC)/ Regional(RC)/Training Program (TP)	Name of the event	Places/dates
1	RC	<i>Innovative Curriculum Designing</i>	<i>Nehru Memorial College, Puthanampatti- Nov. 24-25, 2017</i>
2	RC	<i>Effective Teaching</i>	<i>Nehru Memorial College, Puthanampatti- June. 12, 2017</i>
3	NC	<i>National Seminar on Recent Advances in Chemical Research (RACR-2017)</i>	<i>V.H.N.Senthikumara Nadar College, Virudhunagar. Jan. 24-25, 2017</i>
4	TP (UGC)	<i>Refresher Course</i>	<i>Madurai Kamaraj University, Madurai Nov.02- 22, 2016.</i>
5	NC (RSC)	<i>Catalysis in Organic Transformation</i>	<i>Bharathidasan University, Tiruchirappalli, Oct. 20- 21, 2016.</i>
6	RC	<i>Sustenance/Enhancement of Quality in Higher Education</i>	<i>Nehru Memorial College, Puthanampatti- Aug. 5, 2015</i>
7	NC	<i>Two days National conference on Green and Sustainable nanomaterials</i>	<i>Ganthigram Rural University, Dindigul March, 30- 31, 2015.</i>
8	NC	<i>Faculty Devolepment Programme, Sustenance / Enhancement of Quality in higher education</i>	<i>Nehru Memorial College, Puthanampatti, Tiruchirappalli, Aug.05, 2014.</i>
9	NC	<i>Faculty Devolepment Programme On impact of research on teaching in higher education</i>	<i>Nehru Memorial College, Puthanampatti, Tiruchirappalli, June.11, 2014.</i>
10	NC	<i>Exclusive Workshop for Research Supervisors on Quality Research Report Writing</i>	<i>Bharathidasan University, Tiruchirappalli, Feb.28, 2014.</i>
11	TP (UGC)	<i>Orientation Programme</i>	<i>Madurai Kamaraj University, Madurai. 05-11-2013 to 02-12-2013.</i>
12	RC	<i>Seminar on Examination Reforems</i>	<i>Nehru Memorial College, Puthanampatti, Trichirappalli, Feb. 16, 2013.</i>
13	NC	<i>Emerging Trends in Green Technology</i>	<i>SriRam Engineering College, Chennai, Sep. 13-14, 2012.</i>
14	NC	<i>Salient Aspects of New Accreditation system (Washington Accord)</i>	<i>Sethu Institute of Technology, Virudhunagar, Feb 3-4, 2012</i>
15	NC	<i>Towards Effective communication: A Faculty Workshop</i>	<i>Sethu Institute of Technology, Virudhunagar, Feb 9, 2011</i>
16	NC	<i>Patent Awaremess Program</i>	<i>Madurai Kamaraj University, Madurai. Dec.4, 2009.</i>
17	NC	<i>Green Chemistry</i>	<i>Madurai Kamaraj University, Madurai. July 15-16, 2005.</i>

RESEARCH PROJECT :

Sl.No	Name of the funding agency	Amount in Lakhs	Project Title	DURATION
1	DST (SERB)- India	6,00,000.00	Studies on the Degradation of Industrial Effluent Using Nano Size Metal Oxides as Photo catalysis - A Green Chemistry Approach	1 Year

RESEARCH SUPERVISION / GUIDANCE –Ph.D :

Sl.No	Name of the candidate	Reg. No	Title	Completed / Ongoing
1	Mrs. A. NihathNazleen	Reg.No. 8061	Synthesis, Structure, Invitro DNA Binding Properties Of Transition Metal Complexes	Ongoing
2	N.Santhi	Reg.No. 07331	Synthesis, Characterisation And Applications Of Mixed Metal Oxide Nano Sturtures	Ongoing
3	S.Bhuvaneswari	Reg.No. 16265	‘Synthesis And Structural Studies Of Chemotherapeutic Agents Based On Transition Metal Complexes’	Ongoing
4	A.Mumtaj	Reg.No.10058	‘Synthesis Of Chalcone Derivatives For Chemosensors / Biosensors’	Ongoing

RESEARCH SUPERVISION / GUIDANCE –M.Phil :

Sl.No	Name of the candidate	Reg. No	Title	Completed / Ongoing
1	Mrs. V. Dhanalakshmi	Reg.No. P13HY016	Synthesis, characterization and antimicrobial activities of novel Schiff base of Sulphathiazole derived complexes	Completed
2	Mrs. M. Malarkodi	Reg.No. 2K16MPCH106	Fabrication of novel CuWO ₄ nanosheets for the effective degradation of chronic toxicity antibiotic drug: Ciprofloxacin	Completed
3	Mr. V. Arunkumar	Reg.No. P13HY019	‘Synthesis characterization and antimicrobial studies of a novel Schiff base N-(pyridine-2-yl)-4-((thiophen-2ylmethylene)amino) benzene sulphonamide and Cu(II), Co(II) and Ni(II) complexes	Completed
4	Mrs. R. Hemalatha	Reg.No.P13HY017	‘Synthesis and structural elucidation of sulphonamide complexes – A spectroscopical view	Completed
5	Mrs.R.Latha	Reg.No.M14Y302	Synthesis, characterization and biological evaluation of some 3d-metal complexes of Schiff bases derived from sulphonamide drug	Completed
6	Mr.G.Meiyalagan	Reg.No.M14Y305	Enhanced photocatalytic activity, stability and photocatalytic mechanism of photo deposited W/CdS nanorods	Completed
7	Mrs. G. Sharmila Devi	Reg.No.2K17MPCH109	Facile Synthesis of Palladium Doped Indiumoxide Nano Flower With Improved Visible –Light Photocatalytic Activity	Completed
8	Mrs. D. Muthamilselvi	Reg.No.2K17MPCH107	Photocatalytic Performance of Indium Doped Manganese Oxide Nano composite for the Reduction of Hexavalent Chromium and Degradation of Antimicrobial Drug Tetracycline	Completed
9	P. Sathyasivagami	Reg. No. P18HY0033	Ce _x Zn _{1-x} MoO ₄ nanocomposites: synthesis, optoelectronic, topographic properties and photocatalytic potential in MB removal	Completed
10	C. Stalin	Reg. No. P18HY0059	Nano Ag@ Bioactive microspheres from marine sponge Clathria Frondifera: Fabrication, fortification, characterization and antibacterial potential	Completed
11	A. Megala	Reg. No. P18HY0026	2DCoMnO ₄ /g-C ₃ N ₄ Nanocomposite for pharmaceutical pollutants Ofloxacin degradation under visible light irradiation	Completed

1. [Inorganic Chemistry Communications Vol.134 pp 108991 \(2021\)](#)
2. [Bioorganic and Medicinal Chemistry Letters Vol. 1221 pp 128778-784, \(2020\)](#)
3. [Journal of Molecular Structure Vol.1221 pp 12877 \(2020\)](#)
4. [Inorganica Chimica Acta Vol. 492 pp 48-59, \(2019\)](#)
5. [Journal of Molecular Structure Vol. 1176 pp 591-604, \(2019\)](#)
6. [Journal of Molecular Structure Vol. 1157 pp 201-209, \(2018\)](#)
7. [Journal of Molecular Structure. 1138 pp 208-214, \(2017\)](#)
8. [Journal of Ad.App.Sci.Res Vol. 1-9 pp 62-67, \(2017\)](#)
9. [American Scientific Publishers Materials Focus Vol. 5, pp. 1–9, 2016](#)
10. [Int. J. Adv.Res. Vol. 1\(5\) pp 414-424, \(2013\)](#)
11. [Am. J. PharmTech Res. Vol. 3\(3\) pp 416-429, \(2013\)](#)
12. [Am. J. PharmTech Res. Vol. 3\(3\) pp 512-529, \(2013\)](#)
13. [IOSR Journal of Engineering \(IOSRJEN\) Vol. 3\(3\) pp 18-27, \(2013\)](#)
14. [International Journal Of Engineering And Science Vol. 2\(12\) pp 16-25, \(2013\)](#)