

SARATHI ARUNACHALAM M.Sc., M.Phil., Ph.D.

Principal

V.H.N.Senthikumara Nadar College (Autonomous)

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Enthusiastic and passionate about contributing to team success through hard work, attention to detail, and excellent organizational skills. Possess a clear understanding of professional goals and willing to be trained in recent trends and motivated to learn, grow and excel in student training and development.

Work History

Associate Professor – 01/01/2012 to till date (over 11 years)

V.H.N.Senthikumara Nadar College (Autonomous), Virudhunagar

- Evaluate students' competencies through written assignments and examinations.
- Provide immediate and constructive feedback to students individually and as group.
- Handle department responsibilities by being the in-charge of important portfolios and managing the course files to be submitted to auditing committees.

Assistant Professor – 01/01/2006 to 31/12/2011 (6 years)

V.H.N.Senthikumara Nadar College (Autonomous), Virudhunagar

- Prepared lessons for over 16 classes per week to accommodate students with varying proficiency levels.
- Utilized multimedia strategies and technology to convey information in fresh and interesting ways.
- Provided grades and progress reports to the students each semester to evaluate student learning needs.

Senior Lecturer – 30/03/2003 to 31/12/2005 (2 years)

V.H.N.Senthikumara Nadar College (Autonomous), Virudhunagar

- Taught to a diverse student population by employing various learning styles and abilities.
- Created excitement and enthusiasm in the classroom by delivering engaging subject discussions.
- Reached out to struggling students to identify areas of confusion and rectified them before their exams.

Lecturer – 09/03/1998 to 29/03/2003 (5 years)

Virudhunagar Hindu Nadars' Senthikumara Nadar College, Virudhunagar

- Empathized with the rural students and treated them with special care and compassion.
- Enhanced active teaching skills to interact and engage the students enthusiastically in a classroom.
- Imparted and gave importance to practical knowledge on par with theoretical drilling for holistic development among students of science.

Education

S.No	Name of the Degree	Year	Class	College	University
1.	Ph.D., Chemistry	2009	NA	Virudhunagar Hindu Nadars' Senthikumara Nadar College, Virudhunagar	Madurai Kamaraj University
2.	M.Phil., Chemistry	1991 – 1992	I	Virudhunagar Hindu Nadars' Senthikumara Nadar College, Virudhunagar	Madurai Kamaraj University
3.	M.Sc., Chemistry	1989 – 1991	I	Virudhunagar Hindu Nadars' Senthikumara Nadar College, Virudhunagar	Madurai Kamaraj University
4.	B.Sc., Chemistry	1986 – 1989	I	Kamaraj College, Tuticorin	Madurai Kamaraj University

Accomplishments

- Participated in International or National conferences.

S.No.	Name of Conference and Place	Title of the paper	Date(s)
1.	UGC sponsored National Seminar on Recent Advances in Reaction Mechanism/ Department of Chemistry, VHNSN College, Virudhunagar.	Kinetics of addition of thiophenol to <i>para</i> -substituted β -nitrostyrenes,	29.03.2000
2.	UGC, DST & CSIR sponsored National Seminar on New Frontiers in Chemistry/ Department of Chemistry, Annamalai University, Annamalai Nagar.	Micellar effect on the acid dissociation constant of 2,4-dinitrophenyl hydrazones of 4-substituted 1-acetonaphthones.	15.03.2010 & 16.03.2010

3.	UGC, CSIR & DST sponsored National Seminar on Emerging Trends in Chemistry (ETC – 3,2010)/ PG Department of Chemistry, CPA College, Bodinayakanur.	Activation controlled outer-sphere electron transfer reaction: Reduction of 11-tungstovanadophosphate by thiocyanate ion in weakly aqueous acidic medium.	23.09.2010 & 24.09.2010
4.	UGC sponsored National Conference on “Modern Trends in Chemical Sciences (MTCS-2014)” / Department of Chemistry, VHNSN College, Virudhunagar.	Preparation, Structural Elucidation and Antibacterial Studies of Sonochemically Prepared Chalconoids and Pyrazolines.	18.07.2014 & 19.07.2014
5.	National Seminar on "Emerging Trends in Chemistry"/ Cardamom Planters' Association College, Bodinayakanur.	Fixed Bed Column Studies on the Detoxification of Rhodamine-B by Adsorbent Material Prepared from <i>Madhuca Longifolia</i> Tree leaf.	18.09.2014 & 19.09.2014
6.	National Seminar on "Emerging Trends in Chemistry"/ Cardamom Planters' Association College, Bodinayakanur.	A Novel Approach to the Synthesis of Pyrazoline Derivatives, Spectral Characterization and Antimicrobial Studies.	18.09.2014 & 19.09.2014
7.	National Conference on “Advances in Coordination Chemistry” /Department of Chemistry, Renganayagi Varatharaj College of Engineering, Sivakasi.	Conversion of Fly ash into zeolites and its industrial application in the detoxification of dye.	19.12.2014 & 20.12.2014
8.	SERB sponsored National Seminar on “Emerging Trends in Bio-inorganic Chemistry (ETBIC-2015)” / Department of Chemistry, VHNSN College, Virudhunagar.	Synthesis, Structural Elucidation and Inhibitory Study of Carbazole Transition Metal Complexes.	23.01.2015 & 24.01.2015
9.	SERB sponsored National Conference on “Recent Development of Bio-inorganic Chemistry in Medicinal Fields (RDBICM-2015)” / Mohamed Sathak Engineering College, Kilakarai.	Structural Elucidation and Anti Microbial Study of Benzil Transition Metal Complexes.	28.08.2015 & 29.08.2015
10.	SERB sponsored National Conference on “Recent Development of Bio-inorganic Chemistry in Medicinal Fields (RDBICM-2015)” / Mohamed Sathak Engineering College, Kilakarai.	Synthesis, Structural Elucidation and Microbial Inhibitory Study of 8-Hydroxyquinoline Transition Metal Complexes.	28.08.2015 & 29.08.2015
11.	SERB sponsored National Conference on “Recent Development of Bio-inorganic Chemistry in Medicinal Fields (RDBICM-2015)” / Mohamed Sathak	Synthesis, Characterization and Antibacterial Studies of 1,3-diphenyl-	28.08.2015 & 29.08.2015

	Engineering College, Kilakarai.	3(phenylthio) propan-1-ones.	
12.	International Conference on "Nanomaterials for Energy, Environment, Catalysis and Sensors (ICNEECS-15)" / Department of Physical Chemistry, School of Chemistry, Madurai Kamaraj University, Madurai.	Polyaniline Conducting Polymer as a Adsorbent for the Removal of Congo Red Dye: Synthesis and Adsorption Studies.	11.12.2015 & 12.12.2015
13.	International Conference on "Nanomaterials for Energy, Environment, Catalysis and Sensors (ICNEECS-15)" / Department of Physical Chemistry, School of Chemistry, Madurai Kamaraj University, Madurai.	Synthesis, Characterization and DNA Binding Studies of Amino Acid Incorporated Schiff-Base Transition Metal Complexes.	11.12.2015 & 12.12.2015
14.	International Conference on "Recent Advances in Materials Research and its Applications (ICRAMRIA-15)" / St. Xavier's College, Palayamkottai.	Synthesis, Characterization and DNA interaction study of alanine incorporated Schiff-base complexes.	16.12.2015
15.	International Conference on "Recent Advances in Materials Research and its Applications (ICRAMRIA-15)" / St. Xavier's College, Palayamkottai.	Removal of Congo red dye from waste water using conducting polymer material.	16.12.2015
16.	Two day National Conference on "Biomaterials in Medicinal Chemistry (BMC-2015)" / Madurai Kamaraj University, Madurai.	Comparative Study of DNA Interaction of Amino Acid Incorporated Schiff-Base Complexes.	21.12.2015 & 22.12.2015
17.	International Conference on "Frontier Areas in Chemical Technologies" / Alagappa University Karakkudi	Comparative Study on The Removal Congo Red using Conducting Polymers.	21.03.2016 to 23.03.2016
18.	International Conference on "Frontier Areas in Chemical Technologies" / Alagappa University Karakkudi	Comparative Study of Biological Activity of Alanine and Valine Incorporated Schiff-base Transition Metal Complexes.	21.03.2016 to 23.03.2016
19.	International Conference on "Cancer Biology: Drug Discovery and Novel Therapeutics" / Department of Zoology & Chemistry, Saiva Bhanu Kshatriya College, Aruppukottai.	Synthesis, Characterization DNA-Interaction and Anti-Microbial Study of Schiff base Cobalt Complex.	29.09.2016 & 30.09.2016
20.	International Conference on "Cancer Biology: Drug Discovery and Novel Therapeutics" / Department of Zoology & Chemistry, Saiva Bhanu Kshatriya College, Aruppukottai.	Investigation of DNA-Interaction Study of Transition Metal(II) Schiff base Complexes.	29.09.2016 & 30.09.2016

21.	International Conference on "Cancer Biology: Drug Discovery and Novel Therapeutics" / Department of Zoology & Chemistry, Saiva Bhanu Kshatriya College, Aruppukottai.	Studies on Electrodeposition and Corrosion behavior of Cu-CeO ₂ Nanocomposite by Direct Current Method.	29.09.2016 & 30.09.2016
22.	National Conference on "Recent Advance in Chemical Research (RACR-2017)" / Department of Chemistry, VHNSN College, Virudhunagar.	Preparation and Characterization of CuZrO ₂ Nanocomposite by DC method.	24.01.2017 & 25.01.2017
23.	National Seminar on "Recent Advances in Bioinorganic and Medicinal Chemistry (RABAMCHEM-2017)" / Department of Chemistry, VHNSN College, Virudhunagar.	DNA- Interaction Study and antimicrobial Activity of Schiff base Transition metal complexes Incorporating Heterocyclic Ligand.	15.02.2017
24.	National Seminar on "Recent Advances in Bioinorganic and Medicinal Chemistry (RABAMCHEM-2017)" / Department of Chemistry, VHNSN College, Virudhunagar.	Synthesis, Structural Elucidation and Inhibitory Study of Benzil Transition metal Complexes.	15.02.2017
25.	National Seminar on "Recent Advances in Bioinorganic and Medicinal Chemistry (RABAMCHEM-2017)" / Department of Chemistry, VHNSN College, Virudhunagar.	Enhanced corrosion resistance of Cu-TiO ₂ composite coatings prepared by DC method.	15.02.2017
26.	SERB sponsored Two Day National Seminar on Frontier Areas in Chemical Sciences/ Department of Chemistry, VHNSN College, Virudhunagar.	Synthesis, structural elucidation and DNA binding study of 4-aminoantipyrine incorporating mixed ligand copper complexes having amino acid as co-ligand.	22.06.2017 & 23.06.2017
27.	SERB sponsored Two Day National Seminar on Frontier Areas in Chemical Sciences/ Department of Chemistry, VHNSN College, Virudhunagar.	Synthesis and structural investigations of valine modified zinc oxide nanoparticles.	22.06.2017 & 23.06.2017
28.	SERB sponsored Two Day National Seminar on Frontier Areas in Chemical Sciences/ Department of Chemistry, VHNSN College, Virudhunagar.	Electrochemical and mechanical studies of electrodeposited Cu -SiO ₂ composite coatings.	22.06.2017 & 23.06.2017
29.	ICMR sponsored Two Day National Conference on Recent Developments in the Applications of Transition Metal Complexes in Bioinorganic and Medicinal Chemistry/ Department of Chemistry, VHNSN College, Virudhunagar.	Electrochemical studies of electrodeposited Cu - CeO ₂ composite coatings.	14.07.2017 & 15.07.2017

30.	ICMR sponsored Two Day National Conference on Recent Developments in the Applications of Transition Metal Complexes in Bioinorganic and Medicinal Chemistry/ Department of Chemistry, VHNSN College, Virudhunagar.	Synthesis and structural investigations of zinc oxide nanoparticles and amino acid modified zinc oxide nanoparticles.	14.07.2017 & 15.07.2017
31.	ICMR sponsored Two Day National Conference on Recent Developments in the Applications of Transition Metal Complexes in Bioinorganic and Medicinal Chemistry/ Department of Chemistry, VHNSN College, Virudhunagar.	Synthesis, structural elucidation and DNA binding study of 4-aminoantipyrine incorporating mixed ligand zinc complexes having amino acid as co-ligand.	14.07.2017 & 15.07.2017

➤ **Published Research Articles under quality publications**

- Kinetics of addition of thiophenol to *para*-substituted β -nitrostyrenes and β -methyl- β -nitrostyrenes, K.Ananthakumar, A.Sarathi, C.Gnanasekaran and A.Shunmugasundaram, *Indian J.Chem.*, **42B**, (2003) 1943 – 1949.
- Base catalysed addition of thiophenol to β -nitrostyrene in aqueous acetonitrile – A kinetic study, P.A.Sarathi, A.Vijayakumar, C.Gnanasekaran and A.Shunmugasundaram, *J.Indian Chem.Soc.*, **81**, (2004) 1157 – 1162.
- Micellar catalysis in the retro-Knoevenagel reaction of ethyl- α -cyanocinnamates, K.Rajasekaran, A.Sarathi and S.Ramalakshmi, *J.Chem.Sci.*, **Vol.120, No.5**, (2008) 475 – 480.
- Kinetics and mechanism of triethylamine catalysed Michael addition of benzenethiol to 1-(2-nitrovinyl)benzene in acetonitrile, P.A.Sarathi, C.Gnanasekaran and A.Shunmugasundaram, *Bull.Korean Chem.Soc.*, **Vol.29, No.4**, (2008) 790 – 794.
- Studies on electron transfer reactions: reduction of heteropoly 11-tungstophosvanadate(V) by L-Cysteine and thioglycolic acid in aqueous acid medium, P.Sami, K.Venkateshwari, N.Mariselvi, A.Sarathi and K.Rajasekaran, *Transition Met. Chem.*, **34**, (2009) 733 – 737.
- Guest – host interactions in the alkaline bleaching of triphenylmethane dyes catalysed by β -cyclodextrin, V.Raj, A.Sarathi, T.Chandrakala, S.Dhanalakshmi, R.Sudha and K.Rajasekaran, *J.Chem.Sci.*, **Vol.121, No.4**, (2009) 529 – 534.
- Studies on electron transfer reactions: reduction of heteropoly 10-tungstodivanadophosphate by L-cysteine in aqueous acid medium, P.Sami,

K.Venkateshwari, N.Mariselvi, A.Sarathi and K.Rajasekaran, *Transition Met. Chem.*, **35**, (2010) 137 – 142.

- Activation controlled outer-sphere electron transfer reactions: reduction of heteropoly 11-tungstovanadophosphate and heteropoly 10-tungstodivanado phosphate by thiourea in aqueous acid medium, P.Sami, K.Venkateshwari, N.Mariselvi, M.Vairalakshmi, A.Sarathi and K.Rajasekaran, *Transition Met. Chem.*, **35**, (2010) 563 – 570.
- Studies on electron transfer reactions: Reduction of heteropoly 10-tungstodivanadophosphate by thioglycolic acid in aqueous medium, P.Sami, K.Venkateshwari, N.Mariselvi, A.Sarathi and K.Rajasekaran, *J.Chem.Sci.*, **Vol.122**, **No.3**, (2010) 335 – 340.
- Preparation and characterization of Cu – ZrO₂ nanocomposite by DC Method, K.Arunsunai Kumar, A.Sakthivel, A.Vijayakumar, A.Sarathi, S.Senthilkumar, *J.Adv.App.Sci.Res.*, **Vol.1-9**, (2017) 54 – 61.

➤ **Guided 12 M.Phil. projects**

S.No.	Name and Register Number	Title of the Project	Year
1.	S.Shamim Rishwana A7810801	Unusual substituent effect in the nucleophilic addition reaction of hydroxide ion to β -methyl- β -nitrostyrene	2008
2.	K.Venkateshwari A8810953	Studies on electron transfer reactions: Reduction of heteropoly 11-tungstophospho vanadate (V) by L-Cysteine in aqueous medium.	2009
3.	S.Amutha A9820800	Diffusion controlled outer sphere electron transfer reaction: Reduction of 10-tungstovanadophosphate by iodide ion in aqueous acid medium.	2010
4.	J.Banumathi B0830050	Impact of substituents on the Infra red absorption frequencies of ethylenic double bonds.	2011
5.	M.Hariharan B0830052	Dual behavior of glycine in the hydrolysis of benzylidenemalononitrile in 50% (v/v) ethanol – water mixture at 25°C.	2011
6.	S.Lalithambigai, B1810702	(E)-3-(Furan-2-yl)-1-phenylprop-2-en-1-one – A retrosynthetic approach.	2012
7.	S.Veeralakshmi B1810704	Green synthesis and characterization of (E)-3-(Furan-2-yl)-1-phenylprop-2-en-1-one.	2012

8.	P.Saranya 12AMCH003	Synthesis, Characterization and Antimicrobial Study of 4- and 4'-Substituted Chalcones	2013
9.	N.Kannan 12AMCH007	Synthesis and Structural Identification of (2E,4E)-1,5-diphenylpenta-2,4-diene-1-ones: A Green Approach	2013
10.	R.Manipriya 13AMCH003	Preparation, structural elucidation and antibacterial studies of sonochemically prepared chalconoids and pyrazolines.	2014
11.	D.Devi Priya 14AMCH002	Simple preparation of enantiomeric Michael adducts of thiophenol to chalcones and its antimicrobial activities.	2015
12.	M.Soundarya 15AMCH005	A green approach to Knoevenagel condensation: Synthesis and characterization of aldehydes with active methylene compounds	2017

Books or Book Chapters Published and Edited

S.No.	Title of the Book with ISBN Number	Title of the Paper	Year
1.	A Treatise on Modern Trends in Chemical Sciences; 978-93-81723-25-8	Preparation, structural elucidation and antibacterial studies of sonochemically prepared chalconoids and pyrazolines.	2014
2.	A Treatise on Emerging Trends in Bio-Inorganic Chemistry; 978-93-81723-31-9	Synthesis, structural elucidation and inhibitory study of carbazole transition metal complexes.	2015
3.	A Treatise on Recent Advances in Bioinorganic and Medicinal Chemistry; 978-93-81723-63-0	DNA interaction study and antimicrobial activity of Schiff base transition metal complexes incorporating heterocyclic ligand,	2017
4.	Treatise on Recent Advances in Bioinorganic and Medicinal Chemistry; 978-93-81723-63-0	Synthesis, structural elucidation and inhibitory study of Benzil transition metal complexes.	2017
5.	A Treatise on Recent Advances in Bioinorganic and Medicinal Chemistry; 978-93-81723-63-0	Enhanced corrosion resistance of Cu - TiO ₂ composite coatings prepared by DC method.	2017
6.	Frontier Areas in Chemical Sciences; 978-93-81723-69-2	Electrochemical and mechanical studies of electrodeposited Cu - SiO ₂ composite coatings.	2017
7.	Frontier Areas in Chemical Sciences; 978-93-81723-69-2	Synthesis and structural investigations of valine modified zinc oxide nanoparticles.	2017
8.	Frontier Areas in Chemical Sciences; 978-93-81723-69-2	Synthesis, structural elucidation and DNA binding study of 4-aminoantipyrene incorporating mixed ligand copper complexes having amino acid as co-ligand.	2017

9.	Recent Developments in the Applications of Transition Metal Complexes in Bioinorganic and Medicinal Chemistry; 978-93-81723-70-8.	Electrochemical studies of electrodeposited Cu - CeO ₂ composite coatings.	2017
10.	Recent Developments in the Applications of Transition Metal Complexes in Bioinorganic and Medicinal Chemistry; 978-93-81723-70-8.	Synthesis, structural elucidation and DNA binding study of 4-aminoantipyrene incorporating mixed ligand zinc complexes having amino acid as co-ligand.	2017
11.	Recent Developments in the Applications of Transition Metal Complexes in Bioinorganic and Medicinal Chemistry; 978-93-81723-70-8.	Synthesis and structural investigations of zinc oxide nanoparticles and amino acid modified zinc oxide nanoparticles.	2017

List of ISBN Books Edited

S.No.	Title of the Book	ISBN Number	Year
1.	A Treatise on Modern Trends in Chemical Sciences.	978-93-81723-25-8	2014
2.	A Treatise on Emerging Trends in Bio-Inorganic Chemistry.	978-93-81723-31-9	2015
3.	A Treatise on Recent Advances in Bioinorganic and Medicinal Chemistry.	978-93-81723-63-0	2017
4.	Frontier Areas in Chemical Sciences.	978-93-81723-69-2	2017
5.	Recent Developments in the Applications of Transition Metal Complexes in Bioinorganic and Medicinal Chemistry.	978-93-81723-70-8	2017

Administrative Duties Held

- Served as IQAC Member
- Assisted in SSR Preparation
- Acted as a Warden in Boys Hostel
- Member of Academic Council
- Member of Examination Committee
- Served as Joint - Controller of Examinations
- Acted as Dean - Internal Exams