Name : **Dr. J.E.SANGEETHA**

Designation : **Assistant Professor**

Department : **Chemistry**

Date of Joining : **23.8.21**

Phone No : **9442045151**

Email : **sangeethaje@americancollege.edu.in**

Educational Qualification:

Degree	**Subject**	**College / University & Place**	**Year Completed**
Ph.D	Chemistry	Madurai Kamaraj University, Madurai	July 2009
M.Sc	Chemistry	The American College, Madurai	2002
B.Sc	Chemistry	Lady Doak College, Madurai	2000

Specialisation in Teaching:

- Inorganic chemistry

Specialisation in Research:

- Inorganic chemistry
- Amide Complexes applications

Research Interests:

- **Synthesis and Characterization of metal Complexes with ligands having Homo/Hetro Atoms as Donors**

Any Other Work Experience:

Designation	Institution / Company	Year - From (month/year)To (month/year)
Lecturer	Lady Doak College	November 2008 to May 2009
Assistant Professor	Fatima College	November 2009 to April 2014
Assistant Professor	Arul Anandar College	September 2014 to April 2015
Assistant Professor	RVS College of Engineering, Dindigul	July 2016 to April 2017
Part Time Lecturer	Lady Doak College	Nov 2017 to April 2018
Assistant Professor	Mannar Thirumalai Naicker College	June 2019 to 22.8.21

Membership in Professional Bodies:

- Digital content Script Reviewer for Chemistry at State Council of Educational Research and Traning,Tamilnadu
- Examiner in S.Vellachamy Nadar College and Mannar Thirumalai Naicker College Madurai

Articles Published in International Journals:

- Template Synthesis of Transition Metal Complexes with Octaamide Macrocyclic Ligand-Asian Journal of Chemistry, Vol.20.No.4 (2008).2673-2678. **J.E.Sangeetha**, S.Meenalochani, K.Radha, A.Selvan and D.Chellappa.
- Synthesis and Characterization of Transition Metal Complexes of 12 and 14- Membered Tetraaza Macrocycles -Asian Journal of Chemistry, Vol.20.No.6 (2008).4749- 4754. **J.E.Sangeetha**, S.Meenalochani, K.Radha and D.Chellappa.
- An overview of food preservation using conventional and modern methods- Journal of Food and Nutrition Sciences 10 (3) 70-79 2022 Rajabhuvaneswari Ariyamuthu, Valentine Rupa Albert, **Sangeetha J.E**
- PROTEIN FOLDING AND MISFOLDING: INSIGHTS FROM BIOCHEMICAL STUDIES [a]**Dr. J. E. Sangeetha,** [b] S.Lavanya, [c]M .Malinidevi, [d]Mrs. M.Krishnaven Eur. Chem. Bull. 2023,12(Special Issue 8), 1725 – 1734

Conference / Seminar Presentations:

S.No	Title of Paper	International/National /State level	Title of the Conference	Institution/ College Name	dt/mm/yr
1	SYNTHESIS AND CHARATERISATIONOF TETRAAZA COMPLEXES	STATE LEVEL	CURRENT RESEARCH TRENDSIN CHEMISTRY	KONGUNADU ARTS AND SCIENCE COLLEGE,COIMBATORE	10.09.04
2	SYNTHESIS AND CHARATERISATION OF OCTAAZA COMPLEXES	NATIONAL LEVEL	RECENT ADVANCES IN THE STUDY OF TRANSITION METAL COMPLEXES	VIRUDHUNAGAR HINDU NADARS SENTHILKUMARA NADAR COLLEGE	13-14.08.08

FDP/Workshop/Conference Attended/participated

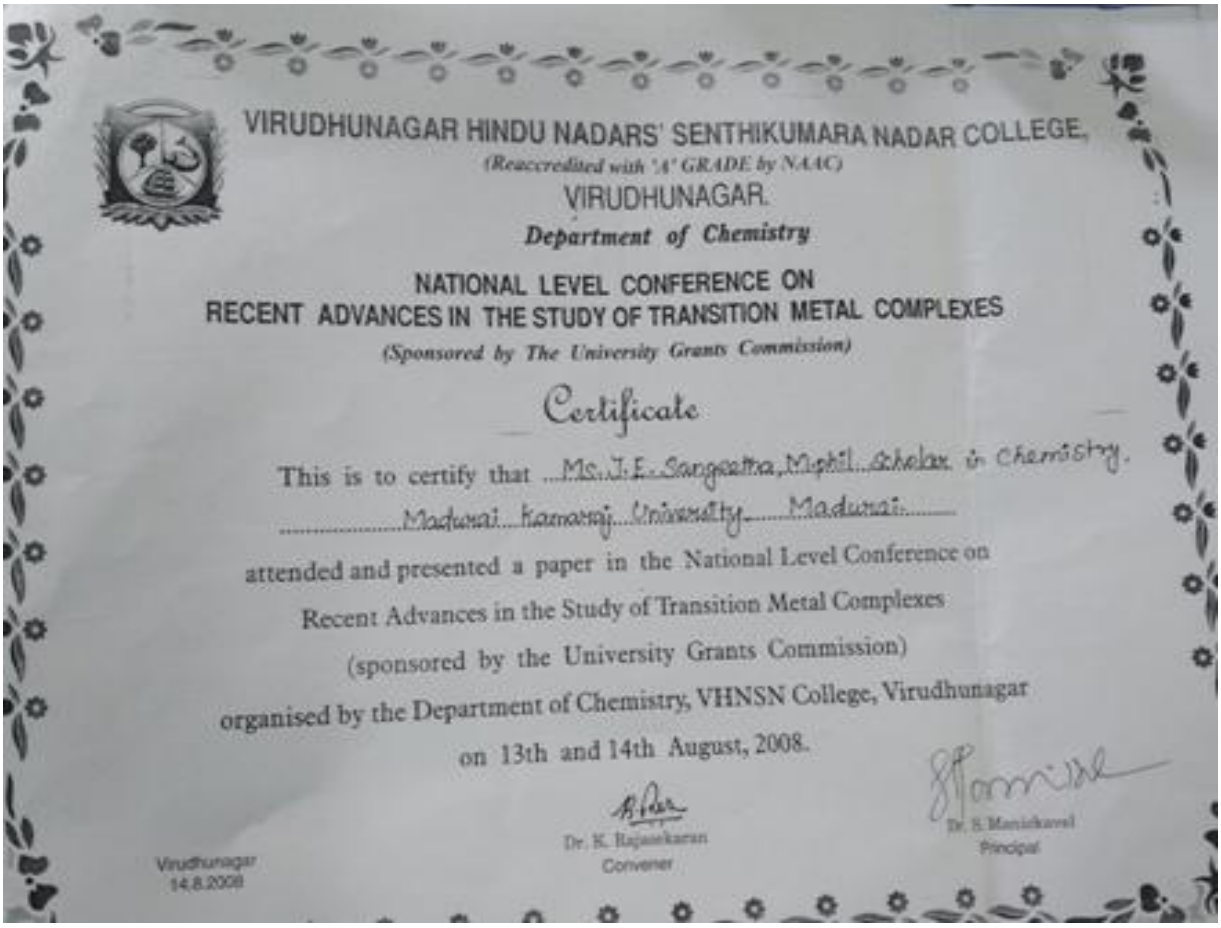
S. No	International/ National / State Level	Title of the Programme/Course	Name of the Institution/University	dt/mm/yr
1.	National Level	GREEN CHEMISTRY	MADURAI KAMARAJ UNIVERSITY	15-16/ 07/2005
2	State level	Outcome Based Education	MannarThirumalaiNaicker College Madurai-04	28th August2019
3	State level	Enrichment of Teaching Skills	MannarThirumalaiNaicker College Maduari-04	1st June 2019
4	State level	21st Century Skills	MannarThirumalaiNaicker College Maduari-04	5th March2020
5	State level	Quality Assurance and Sustenance in Higher Education	MannarThirumalaiNaicker College Maduari-04	11th March2020
6	National Level	WEBINAR- Online National Faculty EnrichmentProgramme	MannarThirumalaiNaicker College Maduari-04	13- 19th May ,2020
7	International Level	WEBINAR-FUNCTIONAL NOVEL MATERIALS FOR ELECTRO CHEMICAL SENSORS AND ENERGY STORAGE DEVICES	THIAGARAJAR COLLEGE, MADURAI	15.5.2020
8	International Level	WEBINAR-STRUCTURAL CHARACTERIZATION OF DRUGS BY SPECTROSCOPIC STUDIES	GTN ARTS COLLEGE,DINDIGUL	20.5.2020
9	International Level	LEADERSIP TALK SERIES SESSION	MHRD-MINISTRY OF HUMAN RESOURCE DEVELOPMENT	23.5.2020
10	International Level	WEBINAR-PREPARATION OF MYSTIC SANITIZER(GERM CLENSING)	PAARVATHY'S ARTS AND SCIENCECOLLEGE, DINDIGUL	25.5.2020
11	International Level	WEBINAR-CHEMISTRY IN EVERY DAY LIFE	KANDASWAMI KANDAR'S COLLEGE, NAMAKKAL	25.5.2020
12	International Level	WEBINAR-METAL FREE PHOTO CATALYSTS FOR ENVIRONMENT ENHANCING	THIAGARAJAR COLLEGE, MADURAI	27.5.2020

13	International Level	WEBINAR-Nano scale materials with differentdimensions for advances applications	MannarThirumalaiNaicker College Maduari-04	3-4/6/2020
14	National Level	Webinar- Role of Fluorescent probs in RT-PCR based disease diagnosis and the chemistry behind Covid -19 vaccine	Kathir college of education	25.01.2022
15	National Level	Webinar on polymeric Material and Fluorimetry	Annamalai University,	31.1.2022
16	National Level	Virtual Webinar on Digital Fluency	Patel Institute of Science and Management	2.02.2022
17	National Level	Workshop organized by Artificial Intelligence Medical and Engineering Researchers society	AIMERS	5 & 6 .02.2022
18	National Level	FDP on Recent Trends in Research	SRM Institute of Science and Technology	9,&10.2.2022
19	National Level	FDP on Righting Quality Research Paper and Publishing	Indira Ganesan College of Engineering, Trichy	12.2.2022
20	International Level	Webinar on Empowering diversity in science	Dept of Chemistry , Kalasalingam academy of research and education,Krishnan koil.	16.2.2022
21	National Level	Seminar on Modern techniques in Bio sensors for Environmental and clinical analysis	Siddha Institute of Engineering and technology	18, 19. Feb 2022
22	National level	National Science day Symposium	Jaypee University of Information and techonology, Himachal Pradesh	
23	National Level	E-conference on Recent trends in Science and technology	Sant Ramdas Arts ,Commerce and Science college	25.02.2022
24	National Level	Attended Virtual Conference on Sustainable Chemistry and renewable Energy	Universal Intellectual Trust, Villupuram,Tamil Nadu	26 & 27.2.2022
25	National Level	FDP on Emerging Technologies and Teaching Pedagogies I Forensic science	SGT university , New Delhi	21 to 25.2.2022
26	National level	FDP Recent Advances in Chemical science	Thiagarajar College ,Madurai	26 .9.2022
27.	National level	Webinar structural characterization of drugs by spectroscopic studies	G.T.N Arts College Dindigul,	20.5.22
28	National level	Recent Trends in VLSI and Nano Electronics	Sree Vidyanikethan Engineering College (Autonomous), Tirupati, Andhra Pradesh, India	4 to 9.7. 2022

29	International level	Webinar Innovtion in material processing: importance of Ceramic shell moulds for investment of gas turbines components	Bharat institute of Engineering and Technology	20.8.2022
30.	National level	FDP The nuances for scientific writing and publishing	All India Association for Christian Higher education ,New Delhi And Madras Christian college ,Chennai	11 to 19 .7 .2022
31	National level	FDP	Mannar Thirimalai Naicker college	13 to 19 .5.2022
32	National level	Webinar A road map to inclusive education in NPE 2020	Mandsaur University	7.7.2022
33	National level	Seminar Automating liquid handling for life sciences	Chettinad Academy	30.7.2022
34	National level	FDP Current Trends and innovations in Biological Sciences	Chettinad Academy	22 Aug to 7 sep2022
35	National level	National level virtual FDP- recent advances in chemical sciences	Thiagarajar college	26 sep 2022
36	National Level Webinar	National Level Webinar - Frontiers in Functional Materials"	MARUDHAR KESARI JAIN COLLEGE FOR WOMEN	11.10.2022
37	INTERNATIONAL WEBINAR	Effective Teaching: Insights from Education Psychology	Bharat Institute of Engineering and Technology and Indian Ceramic Society, Hyderabad	15.10.2022.
38	International online FDP	Current scenario in advanced materials research and nanotechnology	Rajapalayam Rajus college	14 -18 Nov 2022
39	Workshop	Workshop on Skill development in Analytical	The American College	2 and 3 feb 23
40	International online FDP	Recent research in Materials physics and Nano devices	Rajapalayam Rajus college	21- 25 Nov 2022
41	International level	ICAC-2023 Synthesis and Characterisation of Amide complexes using greener techniques and to study the biological activities of metal complexes	The American College	4th and 5th december2023
42	National level	Recent Advances in Physics - 2024(ICRAP '24)	The American College,	10th and 11th January 2024
42	National level	Green Chemistry	The American College	23rd and 24th January 2024

Book Published

Nanotechnology : Materials and applications- An introductory approach to composite materials



VIRUDHUNAGAR HINDU NADARS' SENTHIKUMARA NADAR COLLEGE,
(Reaccredited with 'A' GRADE by NAAC)
VIRUDHUNAGAR.
Department of Chemistry

NATIONAL LEVEL CONFERENCE ON
RECENT ADVANCES IN THE STUDY OF TRANSITION METAL COMPLEXES
(Sponsored by The University Grants Commission)

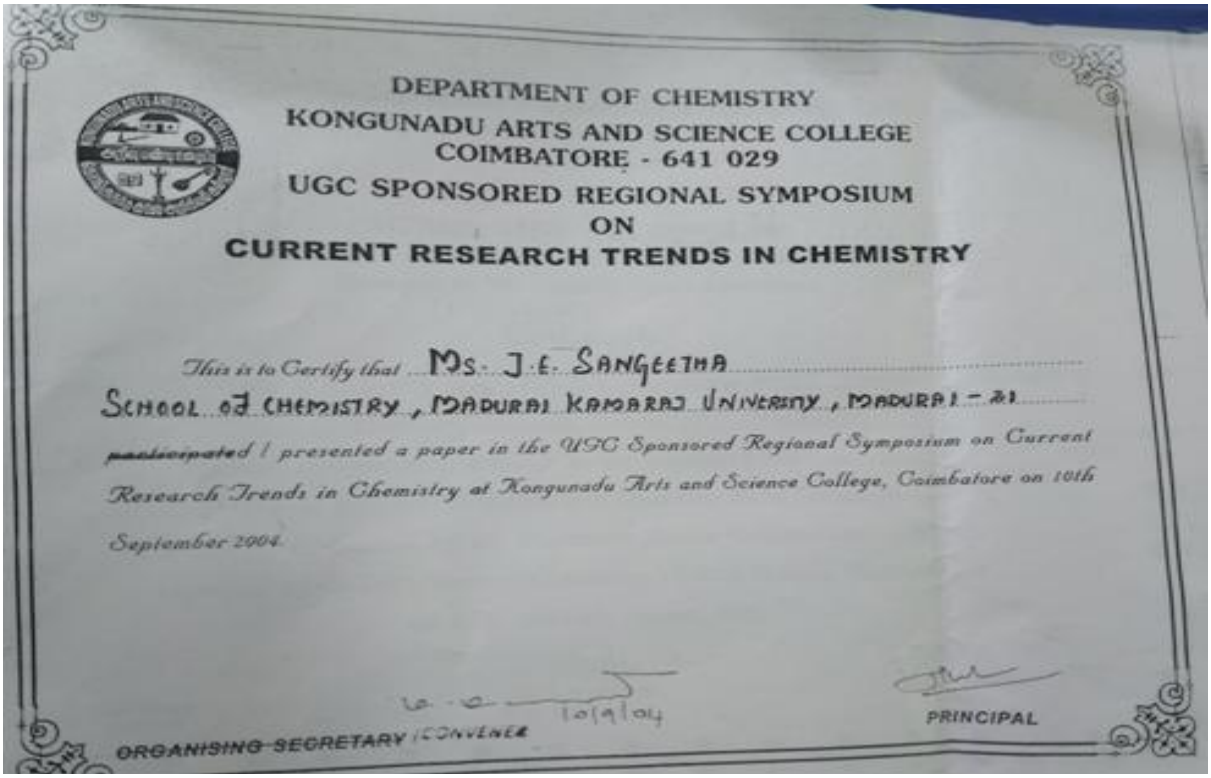
Certificate

This is to certify that Ms. J. E. Sangeetha, M.phil. Scholar in Chemistry.
Madurai Kamaraj University, Madurai.
attended and presented a paper in the National Level Conference on
Recent Advances in the Study of Transition Metal Complexes
(sponsored by the University Grants Commission)
organised by the Department of Chemistry, VHNSN College, Virudhunagar
on 13th and 14th August, 2008.

Dr. K. Rajasekaran
Convener

Dr. S. Manickavel
Principal

Virudhunagar
14.8.2008



DEPARTMENT OF CHEMISTRY
KONGUNADU ARTS AND SCIENCE COLLEGE
COIMBATORE - 641 029
UGC SPONSORED REGIONAL SYMPOSIUM
ON
CURRENT RESEARCH TRENDS IN CHEMISTRY

This is to Certify that Ms. J.E. SANGEETHA
SCHOOL OF CHEMISTRY, MADURAI KAMARAJ UNIVERSITY, MADURAI - 21
~~participated~~ / presented a paper in the UGC Sponsored Regional Symposium on Current Research Trends in Chemistry at Kongunadu Arts and Science College, Coimbatore on 10th September 2004.

10/9/04

ORGANISING SECRETARY / CONVENER

PRINCIPAL

State Council of Educational Research and Training

Certificate

This is to certify

Dr. J. E.Sangeetha, Assistant Professor, Department of Chemistry, The American College, Madurai – 625002, has been active and given her valuable contribution as a reviewer during the conduct of 5 days workshop on **Digital Content Script Review for Chemistry** held from 04-01-2022 to 08-01-2022 at State Council of Educational Research and Training, DPI Campus, Chennai- 6.

Joint Director (Syllabus)
SCERT

Asian Journal of Chemistry Vol. 20, No. 6 (2008), 4749–4754

Synthesis and Characterization of Transition Metal Complexes of 12- and 14-Membered Tetraaza Macrocycles

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Madurai Kamaraj University, Madurai 625 021, India
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Template synthesis of transition metal complexes with macrocyclic tetraaza (N_4) ligands L' and L" [L' = 1,4,7,10-tetraazacyclododecane-2,3,8,9-tetraone and L" = 1,4,8,11-tetraazacyclotetradecane-2,3,9,10-tetraone have been described. The complexes were characterized by elemental analyses, molar conductance, magnetic susceptibility measurements, CV and electronic, IR, EPR spectral studies. On the basis of these studies Cu(II) complex has been assigned tetragonal geometry while other complexes are assigned octahedral geometry.

Key Words: Synthesis, Characterization, Transition metal complexes, 12- and 14-Membered tetraaza macrocycles.

INTRODUCTION

In recent years, more attention is being paid for the preparation of macrocyclic ligand and its complexes, since macrocyclic ligands serve as anion/cation receptors[1,2], while the complexes are used as MRI[3,4] and chemotherapeutic agents[5]. Besides it has been shown recently that macrocyclic oxamide complex by virtue of its exogenous oxygen atoms aids in the preparation of multimetallic complexes[6-12] that were shown to serve as molecular magnetic materials[13], catalysts[14] and biomodels of enzymes[15].

The synthesis of macrocycles bearing multiple metal binding sites either requires multi step process[16] or it becomes difficult due to the competitive formation of acyclic/cyclic oligomers. Hence synthetic techniques such as template synthesis or high dilution have been adopted for the preparation of macrocyclic complexes. Herein, the template synthesis of transition metal complexes is reported with a new aza macrocycle L' and L"* (*Non-template synthesis of complexes with ligand L" have been reported[17]).

EXPERIMENTAL

All the fine chemicals used were of analaR grade. Metal salts procured from E. Merck were used as received. All solvents used were of HPLC/ spectroscopic grade.

Asian Journal of Chemistry Vol. 20, No. 4 (2008), 2673-2678

Template Synthesis of Transition Metal Complexes with Octaamide Macrocyclic Ligand†

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The 'one-pot' template synthesis of metal complexes with a new [2+2] macrocycle bearing four oxamide units is reported. The metal complexes MLX_2, where M = Cu(II), Co(II), Ni(II), Mn(II) and Zn(II), L = 1,4,7,10,13,16,19,22-octaazacyclotetracosane-2,3,8,9,14,15,20,21-octaones and X = Cl^-/ OAc^- have been characterized by elemental analysis, molar conductance, magnetic susceptibility measurements, electronic, IR and EPR spectral studies. On the basis of these studies Cu(II) complex has been assigned tetragonal geometry while other complexes are assigned octahedral geometry and are found to be high spin.

Key Words: Cyclic polyamide, Macrocycle, Transition metals.

INTRODUCTION

In recent years, the preparation of multimetallic complexes gains great importance for it aids in understanding the functional role of metalloenzymes[1], the magnetic interaction between paramagnetic centers[2-8] and for the construction of metallosupramolecular architectures[9]. Polynuclear complexes bearing macrocyclic ligands are of special interest for macrocycle, besides possessing greater kinetic and thermodynamic stability over acyclic analogues, offers special structure and properties. For instance cyclic polyamides have been extensively studied as anion receptors[10] and recently shown[11,12] to bind DNA and inhibit HIV replication. Robertson *et al.*[13], using 'complex as ligand' approach, prepared trinuclear complex with a cyclam based macrocyclic oxamide wherein the enforced exo-*cis* oxygens of oxamide group act as bidentate linkers of mononuclear macrocyclic complex. Adopting this strategy many homo/hetero polymetallic complexes have been subsequently prepared[14-20]. Generally, syntheses of

†The work was presented in UGC sponsored Regional Symposium on Current Research Trends in Chemistry at Kongunadu Arts and Science College, Coimbatore-641 029, India.