

CURRICULUM VITAE

Prof. M. Indira Devi

Department of Chemistry, Nagaland University

- Present Position:**
 - Senior Professor, Dept. of Chemistry
 - Visitor Nominee from MHRD, Shastri Bhavan, New Delhi for Tripura University w.e.f. March 2019 for three years.
- Ex-Dean, School of Sciences Nagaland University (April 2016 – April 2019)

3. Education & Area of Research

Metriculation	Pre University	Graduation	M. Sc	Ph.D
Ist class (1980) (Manipur Board)	<i>Ist Class, 6th Position(1982)</i> (Manipur University)	Pass in Hons (1985) (Manipur University)	<i>Ist class Distinction, Top in physical chemistry (1989)</i> South Gujarat University, Surat.	Oct 1995 Bhavnagar Univ. & CSMCRI, Bhavnagar (Gujarat)

Ph. D Topic : *Spectral Studies of Lanthanide - Complexes in solution : Interpretation & Structure Elucidation*

Area of Research : *Theoretical study of complexation of Lanthanides with biologically Active ligands employing 4f-4f transition spectra & Synthesis of Lanthanide Nanomaterials and its characterizations*

4. Employment

Research Associate	Associate Professor	Professor
1995 -97 Bhavnagar Univ. 1997-1998 Central Salt & Marine Chemical Research Institute(CSMCRI),Bhavnagar(Gujarat) (2yrs)	1997 – 2005 (March) Nagaland University (8years)	2005 (March) Till Date (Above 18 years)

Teaching & Administration

:above 27 years at PG level

Research and Teaching at Post Graduate level (Excluding the Research during Ph.D)

: above 29 years.

5. Administrative Experiences:

Sl.No	Particular	Duration
a.	Founder and Head, Department of Chemistry, Nagaland University.	Oct. 1997 to Sept. 2000
b.	Headship, Department of Chemistry, Nagaland University	5(five) times

c.	Member of Academic Council, Nagaland University	Above 25yrs, Since Oct. 1977 to till date
d.	Member of Executive Council Nagaland University	6 years (2008 to 2011 and 19 th April 2016 to 22 nd April 2019)
e.	(i) Chairperson, Board, School of Sciences (ii) Chairperson, Board of Post-Graduate Studies, Department of Chemistry, Nagaland University.	19 th April 2016 till 22 nd April 2019 15years
G	Chairperson, Board of Under-Graduate Studies, Nagaland University	15 years
H	Vice-President of Nagaland University Teacher's Association, Nagaland University, Lumami Campus	April, 2006 – Feb 2008
i	Member of the Governing Body, St. John College, Jakhama, Nagaland	April 2018 – March 2023
j	Member of Planning Board	Above 15

6.

Projects:

Title	Year	Amount	Funding Agency
1. Studies onPr(III).....and Zn(II)....4f-4f Transition Spectra..	2001 -2004	16.4 lacs	DST, Govt .of India
2. Absorption Spectral Pr (III)/Nd(III) with aminoacid series.....	2007 -2011	11.2 lacs	CSIR, New Delhi
3. FIST, Infra Structure Development for Department of Chemistry as Departmental Project.	2004 -2009	30 lacs	DST, Govt. Of India

7. **Membership in Professional Scientific Society:**

- (i) Life member of National Society of Chemical Research (IISc, Bangalore)
- (ii) Life member of Indian Association of Chemistry Teacher (Mumbai)

8. **Ph.D Degree produced: 10(ten)**

Ph.D, submitting thesis : 2 (Two)

M. Sc. Dissertation : Above 40(forty)

Title of the Thesis	Awarded (No.)
1. Spectral Analysis of Lanthanide Complexes with essential Amino Acids : Kinetic and Thermodynamic Approach	Awarded on 27 th August 2023, Regd no. 787/2017 Ms Zevivunou
2. Theoretical Analysis of the Complexation of Ln(III) with Glutathione/Mg(II) : Its Thermodynamic and Biological Properties	Awarded on 10 th August 2023, Regd. No 786/2017 Mr. Mhasirikho Ziekhru
3. Spectral studies of the Complexation of Lanthanides with selected amino acids : Evaluation of Thermodynamic parameters	Awarded on 6 th June 2023, Regd. No 808/2018 Mr. Chubazenba Imsong
4. Synthesis and Spectral Studies of the Lanthanide Complexes with pyridine and some amino acids: kinetics and Thermodynamic Approach	Awarded on 4 th Sept 2023, Regd. No. 788/2017 Ms. Juliana Sanchu
5. Synthesis of Lanthanides.....spectral and chemical kinetics	Awarded on 29 th June 2022, Regd No 703/2016 Ms. Rukuosenuo Zatsu
6. Kinetic Studies on complexation of Pr(III)/Nd(III) with nucleosides and nucleotides in the presence of Ca(II) through 4f -4f transition as spectral PROBE and evaluation of some thermodynamic parameters	Awarded on 15 th January 2015, Regd no.392/2009 Bendangsenla N
7. Quantitative 4f-4f transition spectral analysis to probe the kinetics of simultaneous complexation of lanthanide ions Pr(III)/Nd(III) with amino acids and metal ions Ca(II)/Zn(II) in aqueous and aquated organic Solvents	16 th April 2013, Regd. No.284/2007 T.Moainla Ao
8. Quantitative 4f-4f transition spectra analysis to probe the kinetics of simultaneous complexation of glutathione reduced with Pr(III) and Nd (III) in presence of Zn(II)/Mg(II) in aqueous and aquated organic solvents	Awarded on 12 th May 2008, Regd no. 198/2005 Sumitra Ch.
9. Spectral analysis of simultaneous complexation of two or three chemically dissimilar metal ions Pr(III)/ND(III)/Er(III) and Ca(II)/Zn(II) with Glutathione using 4f-4f transition spectra as PROBE	Awarded on 27 th August 2006, Regd. No. 189/2005 TH. David Singh
10. Chemical and geochemical aspects of the shales in and around Kohima	Awarded on 17 th Sept, 2004, Regd no. 118/2003 Vineetha K
11. Synthesis of Lanthanide Complexes and their nanoparticles : Its characterization through crystallography and Spectral Techniques	Regn No, Ph.D./CHE/00057 dated 28/08/2017 Mr. Punazungba Thesis Submitting
12. Synthesis of Lanthanide Complexes : Spectral studies and its approach as Nanomaterials	Regn. No. Ph.D./CHE/00056 Dated 28/08/2017 Ms. Sentienla Imsong Thesis Submitting

Achievements :

- (a) **Key Note Speaker, 9th Int'l Conference on Physical Chemistry (CPC 2024)**
Held from 19 -21 April 2024, in Xiamen China
- (b) **Participated as Invited Speaker at The 4th Int'l Conference on Physical Chemistry (CPC 2018)** held from July 14-16, 2018 in Kunming, China
- (a) **Reviewer and Invitee Of [2014 Global Conference on Polymer and Composite Materials \(PCM 2014\)](#)** held
27 – 29th May 2014, at Ningbo, China.
- (b) **Referee of the Journal of Material Science and Nanotechnology**
- (c) **Nominated Sir Thomson Herold Award 1995-96 : International Best Research Paper Award conferred once in a year Under SpectrochimicaActa, Elsevier Science, UK**
- (d) **One of the research Scholars has been conferred Women Scientist Award under DST, Govt. of India with effect from 1st March 2008 for three years. No. SR / WOS – A/CS-04/2008 Dated 22/09/2008**
- (e) **One of the research paper entitled “Spectral studies of the complexation of Nd(III) with glutathione(GSH) in presence and absence of Zn(II) in aquated organic solvents” Journal of Chemical Sciences, 116(2004)303-309 has been edited by San Francisco Edit as a relevant and innovative Research Work by January 2008.**

9. MONOGRAPH :

Absorption Spectral analysis for the interaction of Pr(III)/ Nd(III) with various ligands using 4f-4f transition spectra: Pseudohypersensitive Transitions. (Monograph)

BOOKS

- i. *Significance of Lanthanides and its interaction with Nucliec Acids (Lambert Academic Publishing 978-3-659-63939-5) (published in Oct 2017)*
- ii. *Biological and Clinical Approach of Lanthanides (Lambert Academic Publishing, 978-620-2-02381-8) (Published in December 2017)*
- iii. *Computational Chemistry of Lanthanide Spectra: Application in Theoretical Analysis. (Lambert Academic Publishing, 978-613-8-38832-6) (Published in April 2018)*
- iv. *Analysis of Physio- Chemical Properties and Microbial Contamination to Check the Quality of Water, Lumami, Zunheboto– Nagaland Science of Environment (Volume -- III) SCIENG PUBLICATION, 154 – 169, 2022*

10. **Research Publications:** 35(thirty five), Details of which are available in University Library website.

International -26
National - 9, out of which

Total Publications: 35

S.No.	Date	Title	Name of journal	Refereed journal or Not	Impact factor
1	19-03-2024	Facile synthesis of lanthanides.....systematic characterization.	Z.Phys.Chem	yes	3
2	28-03-24	Qualitative analysis of the coordination nature of theantimicrobial properties	JOAC	Yes	
1	Proof sent on the 6 th August 2023 Re:Proof_PhysChA10_23 (14.08.23)	Spectral analysis for the complexation of Nd(III) with L-Tryptophan and L- Isoleucine in the Presence/absence of Mg(II) :4f-4f Transition Spectra as Probe	Rusian Journal of Physical Chem	2023vol 97No.10 pp2149-2159 Scopus, WoS And under UGC approved	2.944 (for 2021)
2	10 th March 2023	Synthesis, characterization, Antioxidant and antibacterial Studies of Praseodymium complex with glutathione	Current Science Vol .124 No 5, 10 th March 2023	Scopus, WoS And UGC approved (Refereed)	1.169 (Elsevier Pub)
3	13 th Nov 2022	Computation of Spectral parameters for the complexation of Pr(III) with L- Histidine through 4f -4f transition spectra : Further analysis of its kinetic and thermodynamic parameters	Chemical Physics Impact 5(2022) 100127	-Do-	2.552 (Elsevier Pub)
4	24 th Sept. 2022	Theoretical Study of the heterometal complexation of Pr(III) with L-Isoleucine in the presence/absence of Mg(II) in solution : 4f – 4f transition spectra as probe	Chemical Physics Impact 5(2022) 100108	-Do-	-Do-
5	19 th Sept. 2022	4f-4f Transition Spectra of the Interaction of Pr(III) with L-Valine in Solution : Kinetics and Thermodynamic Studies	Asian Journal of Chemistry 34, 10(2022) 2688 -2696	-Do-	0.159

6		Absorption Spectral Study for the Interaction of Pr(III) with L-Aspartic Acid in various aquated organic solvents through 4f-4f transition spectra : Analysis of reaction pathways and thermodynamic parameters	Journal of Pharmaceutical Negative results 2022; 13(1) :860 - 78	UGC Care Listed	
7		Complexation of Pr(III) with L-methionine in the presence /absence of Mg (II) :their reaction dynamics and thermodynamic properties,	Chemical Phys Impact 2022;4:100078	Scopus, WoS And UGC Care Lists	2.552 (Elsevier Pub)
8		Computational study of multimetal complexation of Nd(III) with GSH and Mg(II) in solution at different Ph through 4f-4f transition spectra	Chemical Phys. Impact 2022 :5. 100090	-Do-	-Do-
9		Absorption spectral and thermodynamic analysis for the complexation of Pr(III) with L-Phenylalanine in the presence / absence of Mg(II) using 4f-4f transition spectra as probe	Eur Phys J Plus 2022,137(5)608	-Do-	-Do-
10		Theoretical computation of interaction parameters for the complexation of GSH with Pr(III) and Mg(II) in solution. Analysis of their reaction dynamics and thermodynamic Characters	J Indian Chem Soc 2021, 98(12)	-Do-	1.65
11		Computation of energy interaction and intensity parameters for the complexation of Pr(III) with glutathione at different pH in the presence and absence of Mg(II) : 4f -4f transition spectra as a probe	Polyhedron 2021,200	-Do-	2.6 (Elsevier Pub Cited 15843)
12		Chrystal Structure and Hirshfeld surface analysis of Rac – 2 –[2-(4-Chlorophenyl)-3,4-dihydro-2H -1-benzo-pyran-4-ylidene] Hydrazine-1-carbothioamide	Research Communications Acta Cryst (2019) E75, 707-710	-Do-	0.39
13	31 st July 2018	Computation of Energy, Intensity and Thermodynamic Parameters for the Interaction of La(III) with Nucleic acids : Analysis of Structure conformations, chemical kinetics and thermodynamics behavior through 4f-4f transition Spectra as probe	Journal of Material Sciences and Engineering, 6, 169 -183, 2018 10.4236/msce.2018.67018	UGC listed	6.044
14	8 th May 2018	4f-4f Transition Spectral Analysis to probe the kinetics for the complexation of Nd(III) with Guanosine Guanosine	Journal of Adv Chemical Sciences 2(2018)556-561	-Do-	

		Triphosphate(GTP)			
15		A Probe into the kinetics of the interaction of Pr(III) Ions with some selected Amino acids : A 4f-4f transition spectral study	Advances in Material Science and Application, 2014 ;4(3) 157 - 163	-Do-	2.8
16	13 March 2012	Comparative 4f-4f absorption spectral approach to study the complexation of Pr(III) with glutathione and guanosine triphosphate(GTP) in the presence/absence of Ca(II).	International Journal of Basic and Applied Chemical Sciences 2013, 3(1)19-30	-Do-	
17	16 th Nov. 2012	Evaluation of intensity and energy interaction parameters of the complexation of Pr(III) with selected nucleoside and nucleotide through absorption spectral studies	Spectrochimica Acta part A 103(2013) 16-166	Scopus, WoS & UGC care list	4.831 (Elsevier Pub)
18		Comparative 4f-4f absorption spectral studt for the interaction of Nd(III) with some amino acids: Preliminary thermodynamics and kinetic studies of interaction of Nd(III): glycine with Ca(II)	Spectrochimica Acta part A 87(2012) 142-150	-Do-	-Do-
19	6 th June 2009	Computation of Energy Interaction Parameters as well as Electric Dipole Intensity parameters for the absorption spectral studies of the interaction of Pr(III) with L-Phenylalanine, L-Glycine, L- Alanine and L-Aspartic Acid in presence and absence of Ca(II) in Organic solvents	Spectrochimica Acta part A 74(2009) 434- 440	-Do-	- Do-
20		Absorption Spectral Studies of 4f-4f Transitions for the Complexation of Pr(III) and Nd(III) with Gluthathione reduced (GSH) in presence of Zn(II) in Different Aquated Organic solvents and Kinetics for the complexation of Pr(III):GSH with Zn(II)	Journal of Alloys and Compounds (JALCOM) 451(2008) 365 - 371	-Do-	6.371 (Elsevier Pub)
21		Calculation of electric dipole intensity parameters of 4f-4f transitions of Pr(III) and glutathione complex reduced (GSH) in presence and absence of Zn(II)	Spectrochimica Acta part A 66(2007)1333-1339	-Do-	4.831 (Elsevier Pub)
22		Calculation of electric dipole intensity parameter to explore some of the interaction between hard metal ions Pr(III) and Nd(III) with <i>M</i> -electron density	Spectrochimica Acta Part A 63 (2006)154-159	-Do-	-Do-

		of butane-1,4 and butyne-1,4 diols in non-aqueous solutions: An absorption spectral study			
23		Comparison of Energy Interaction Parameters for the Complexation of Pr(III) with Glutathione reduced (GSH) in presence and absence of Zn(II) in aqueous and aquated organic solvents using 4f-4f transition spectra as PROBE	Spectrochimica Acta Part A 61(6) (2005) 1219-1225	-Do-	--Do-
24		Comparison of electric dipole intensity parameter for a series of structurally related Pr(III) complexes with ureas and thioureas in non-aqueous media	Asian Journal of Chemistry 17, 3(2005) 1435-1445	-Do-	0.158
25		Calculation of electric dipole intensity parameter for the complexation of Pr(III) and Nd(III) with 1,10-Phenanthroline and 2,2'-Bipyridyl by 4f-4f absorption spectral analysis	Asian Journal of Chemistry 20,2(2008)	Do-	0.158
26	August 2004	Electric Dipole intensity of non-coordinated complexes of Nd(III) with diols in non aqueous solution : Evidence of participation of pi- electron density of diols with Nd(III)	Single authored Paper Indian Journal of Chemistry 43(2004) 1692-1695	-Do-	0.412
27	Nov 2004	Spectral study of the complexation of Nd(III) with glutathione reduced (GSH) in the presence and absence of Zn(II) in aquated organic solvents	Journal of Chemical Sciences 116, 6(2004)303-309	-Do-	2.15
28		Biological and Clinical Aspects of Lanthanide Coordination Compounds	Bioinorganic Chemistry and Applications 2(3-4),(2004)155-192	-Do-	4.724 Cited107
29		An absorption Spectral Study of 4f-4f transitions for the Interaction of Pr(III) with different Amino acids in aqueous and aquated Organic Solvents	Asian Journal of Chemistry 16(1),(2004)412-428	-Do-	0.159
30		Simultaneous interaction of two Dissimilar Metal Ions with Tripeptide Glutathione (reduced) in different aqueous organic solvents : An absorption Spectral Study	Chemical & Environment Research 12(3&4) (2003) 295 -305	-Do-	0.22
31		Absorption Spectral Studies Involving 4f-4f Transitions as Structural Probe in Chemical and Biochemical Reactions and Compositional Dependence of Intensity Parameters	Applied Spectroscopy Reviews 38(4) (2003)433-493	-Do-	11.8

32	January 1997	Comparison of electric – dipole intensity parameters for series of structurally related Nd(III) complexes with ureas and thioureas media.	Spectrochimica Acta Part A. 35 (1997) 17-22	-Do-	4.831
33		Electric Dipole intensity parameters for a series of Structurally related Praseodymium(III) complexes and unusual sensitivities of some 4f-4f transitions	Reviews in Inorganic Chemistry 14(5)(1994) 347-360	-Do-	4.1

Publication of Patents :3(Three) Nos

1. A novel process of making lanthanum nanoparticle. **Application no. 202431028201A.** Publication date: 19/04/2024
2. Novel catalyst for organic reactions and process thereof. **Application no. 202431028202A.** Publication date: 19/04/2024
3. A novel complex for antioxidant properties. **Application no. 202431029652A.** Publication date: 12/04/2024

References :

1. Prof. Jagadish Kumar Patnaik
Vice Chancellor, Nagaland University, Lumami Hqrs:
Ph. No. 7085175818
Mailing add: vc@nagalanduniversity.ac.in
2. Prof. G. D. Sharma
(Former Vice Chancellor, Nagaland University)
Ex-Vice Chancellor, Bilaspur Visobidyalaya
Ph. No. 9406218401
gduttasharma@yahoo.co.in
3. Prof. G. P Prasain
Present Vice Chancellor, Tripura University
Contact no 7005841371/ 7085066699/

