

CV
of
Dr. N. SURENDRA BABU M.Sc.,Ph.D



Present Address

Dr.N.Surendra Babu
Associate Professor
Department of Chemistry
College of Natural and Mathematical Science
The University of Dodoma
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Date of Birth: 06/08/1972

EDUCATION

Ph.D in Chemistry (Physical Chemistry)
Sri Krishnadevaraya University

5th December 2002
Anantapur, INDIA

M.Sc, Chemistry (Physical Chemistry)
Sri Krishnadevaraya University

1996
Anantapur, INDIA

B.SC (Mathematics, Physics and Chemistry)
Sri Venkateswara University

1993
Tirupathi, INDIA

Ph.D Topic: Physico-Chemical studies on the interaction between water soluble polymers and surfactant Aggregates

AWARDS AND FELLOWSHIPS

Award:

Professor B.N. Ghosh 80th Birthday Commemoration Award for the year 2006. Presented by Indian Chemical Society, Kolkata-700 009. INDIA.

TEACHING EXPERIENCE (14 years)

Associate Professor
Department of Chemistry, College of Natural and Mathematical Science
The University of Dodoma Tanzania

6/9/2015 to till to date

Assistant Professor Hawassa University, Department of Chemistry, Hawassa, Ethiopia	2009- 2015
Lecturer Sri Krishnadevaraya University College of Engineering & Technology Sri Krishnadevaraya University main campus, Anantapur, INDIA	2006-2009
Lecturer Jawarlal Nehru Technological University, Oil Technological Research Institute (OTRI), Centre for PG Studies Anantapur, INDIA	2005-2006
Assistant professor S.S.N.Degree College (Pg courses) (Affiliated to A.N. University,Guntur) Ongole, India	2004-2005
Assistant professor National post graduate collage (Affiliated to S.K.University,Anantapur) Nandyal, Kurnool Dist, INDIA	2003-0004

Teaching, Learning and Evaluation related activities

► Teaching the following papers for M.Sc Chemistry

1. Advanced Physical Chemistry
2. Advanced Analytical Instrumentation
3. Computational Quantum Chemistry
4. Advanced Solid State Chemistry
5. Advances in Renewable Energy
6. Advances in Material Science
7. Advanced Biopolymer Materials

► Teaching the following papers for B.Sc Chemistry

1. Chemical Thermodynamics
2. Chemical Kinetics and Catalysis
3. Electro Chemistry and Corrosion protection
4. Quantum chemistry
5. Surface and Colloid chemistry
6. Spectroscopy
7. Polymer Chemistry
8. Material Science
Including practical's

► Participatory and Innovative teaching – learning methodologies; updating of subject content, course improvement and Curriculum development etc

Examination duties (invigilation; question paper setting, evaluation/assessment of answer scripts.

Software skills: **Computational chemistry software's:** Gaussian 09W and Gaussview 5.09, Spartan and Chem office, KyPlot and Minitab.

Research supervision

- Two Ph.D candidates (present working)
- Two Master student (present working) in addition B.Sc student's projects.

PUBLICATIONS

1. A review of third generation solar cells: Polymer solar cells
N.Surendra babu, Elixir Comp. Chem. 108 (2017) 47759-47766
2. Theoretical studies of Electronic and Optical properties for some new Azo disperse dyes for Dye-Sensitized Solar Cells (DSSCs) by using TD and TD DFT method. Journal of materials and Environmental Sciences. (2017) Volume 8, Issue X, Page XX-XX (accepted).
Isaac Onoka, Numbury Surendra Babu and John J. Makangara
3. Theoretical studies of Electronic and Photovoltaic Properties of New Derivatives of Sudan dye by DET and TD-DFT method. Elixir Appl. Chem. (2017)106, 46704.
Numbury Surendra Babu, J.J.Makagara and Isaac Onoka,
4. DFT studies of Molecular Structure, Electronic, Thermodynamic and Nonlinear optical properties of Leucomalachite green dye. American International Journal of Research in Formal, Applied & Natural Sciences, (2017) 18(1), 20.
Numbury Surendra Babu, Jhon .J. Makangara and Issac Onoka,
5. Chemometrics Studies for global and local reactivity descriptors of amide-imidol tautomers of lactams by HF and DFT methods at different basis sets in gas phase.
N.Surendra babu Saidi, Mohamedi Katundu, and John Joseph Makangara. European Journal of Biomedical and Pharmaceutical Sciences
6. Computational Studies of Molecular Structure, Vibrational Frequencies and Equilibrium Constant for Lactam-Lactim Tautomerism by HF and DFT Methods in Gas Phase.
Saidi Mohamedi Katundu, N.Surendra babu and John Joseph Makangara. Elixir Comp. Chem. 108 (2017) 47759-47766
7. Theoretical Studies of Transition State, Equilibrium constants and Molecular descriptors of 2-amino-1, 3-benzothiazole tautomers by Density Functional Theory (DFT). Elixir Appl. Chem. (2016) 91, 38164.
N. Surendra Babu
8. Computational and Chemometrics study of molecular descriptors for butene derivates by Density functional theory (DFT). Journal of Chemical and Pharmaceutical Research, (2016) 8(4):1107-1117.
N. Surendra Babu and Isaac Onoka

9. Computational Studies for Inhibitory Action of 2-Mercapto-1-Methylimidazole Tautomers on Steel Using of Density Functional Theory Method (DFT). International Journal of Computational and Theoretical Chemistry, (2016) 4(1),1.
Vinod Kumar, John Makangara, C. Laxmikanth, Numbury Surendra Babu
10. Computational studies of stability and molecular descriptors of 2-pyridone and 2-pyridinethione tautomers by density functional theory (DFT). European Journal of Biomedical and Pharmaceutical Sciences, (2016) 5(3), 690.
N. Surendra Babu, Isaac Onoka and Vinod Kumar Tappa
11. Theoretical study of the electronic spectra, static first hyperpolarizability and antiradical capacity of 2-pyridone tautomers by density functional theory (DFT). AIJRPLS, (2016) 1(1), 19.
C. Laxmikanth N. Surendra Babu, Isaac Onoka,
12. Computational Studies and Multivariate Analysis of Global and Local Reactivity Descriptors of five Membered Heterocycles Molecules by Density Functional Theory (DFT). International Journal of Pure and Applied Researches, (2015) 1(1), 61-70.
N. Surendra Babu and P. Prashanth Kumar
13. Studies for reactivity indexes of cyanuric acid tautomers in different solvents by ab initio Hartree – Fock (HF) theory. Journal of Advances in chemistry, (2015) 11 (8), 3828.
Numbury Surendra Babu and Didugu Jayaprakash .
14. Studies of Global and Reactivity descriptors of Cyanuric acid tautomers in different by using Chemometric Methods . Elixir Appl. Chem, (2015) 83, 33285.
N.Surendra Babu and Jayaparkesh
15. Global and Reactivity descriptors studies of Cyanuric acid Tautomers in different solvents by using of Density Functional Theory (DFT). International Journal of Science and Research (IJSR).(2015)4(6),615.
N. Surendra babu and Didugu Jayaprakash
16. Theoretical Study of Molecular Structure and Tautomerism of N-(Pyridine-2yl) acetamide By Density Functional Theory (DFT). Elixir Comp. Chem. (2015) 82, 32446.
N.Surendra Babu , Sisay Tadesse and Didugu Jayaprakash
17. Density Functional Theory (DFT) Studies of the Stability of Tautomers and equilibrium constants of Cyanuric acid (CA) in different solvents. Journal of chemical and pharmaceutical research.(2015) 7(4),1155.
Numbury Surendra babu and Didugu Jayaprakash
18. Theoretical Investigation of Transition state for the purine alkaloids 1,3-dimethyl isoguanine and 6-amino-1,3-dimethyl-1H-purin-2(3H)-one by Density Functional Theory (DFT). International Journal of Research studies in Science, Engineering and Technology.(2015)2 (5),11.
N. Surendra Babu, Teshome Abute Lelisho and sisay Tadesse
19. Combined Computational and Chemometric study of Benzothiazole molecule by Semiempirical, Hartree – Fock (HF) and Density Functional Theory (DFT) at different levels of Basis sets. International journal of Applied Research. (2015)1(5), 53.
N.Surendra babu and G.Y.sagar
20. Computational and Chemometric studies of Global and local reactivity descriptors of N-(Pyridine-2-yl) acetamide isomers by Density Functional Theory (DFT). Journal of chemical and pharmaceutical research. (2015) 7(3), 2224.

- N.Surendra babu and G.Y.sagar
21. Ab initio and Density functional theory studies of vibrational spectra, and assignment of fundamental modes of Benzothiazole. International Journal of Chemical Studies. (2015) 2(6), 77.
N.Surendra babu
 22. Computational studies on molecular structure and interpretation of vibrational spectra, thermodynamical and HOMO-LUMO analysis of mephedrone using density functional theory and ab initio methods. European Journal of Biomedical and Pharmaceutical Sciences. (2015) 2(2),18.
N. Surendra Babu and Sisay Tedase
 23. Computational Study of the Stability of Tautomers and equilibrium constants of Cyanuric acid (CA) in Different solvents. Journal of Advances in Chemistry.(2015) 11(2), 3485.
N. Surendra Babu and Didugu Jayaprakash
 24. Analysis of Selected Metals in Edible Fish and Bottom Sediment from Lake Hawassa, Ethiopia. Elixir Appld. Chem. (2015) 82, 32610.
Ermias Haile, Sisay Tadesse, N.Surendra Babu and Milkyas Endale
 25. Theoretical studies of the Vibrational spectra and Molecular electrostatic potentials (MEP) of Allopurinol isomers. Elixir Comp. Chem. (2014)70, 24114.
N.Surendra Babu
 26. Theoretical Studies of Stability, and Local Molecular Properties of Allopurinol Isomers by Density Functional Theory. . International Journal for Pharmaceutical Research Scholars (IJPRS).(2014) 3(1), 2014.
N. Surendra Babu, Sisay Tedasse, T. A. Lelisho, Nimmagadda Padmaja
 27. Computational studies for oxidation – reduction reactions of Cinnoline-4(1H)-one in aqueous phase by Density functional Theory. British Journal of Applied Science & Technology. (2014) 4(3), 465.
N.Surendra babu
 28. Solvent effects on the relative stability for tautomerism of (*R*)-4-amino-1,2-oxazolidin-3-one(Cycloserine). Ab initio and Density functional theory calculations. Journal of Computational Methods in Molecular Design.(2013) 3(3),19.
N.Surendra Babu
 29. Theoretical Study of Stability, Tautomerism, Equilibrium Constants (pK_T) of 2-Thiouracil in Gas Phase and Different Solvents (Water and Acetonitrile) by the Density Functional Theory Method. American Chemical Science Journal. (2013) 3(2), 137.
N.Surendra Babu
 30. Computational and electrochemical studies on the redox reaction of for quinoxalin-2(*H*)-one and its derivatives in aqueous solution. Journal of Chemical and Pharmaceutical Research. (2013) 5(2), 61.
N. Surendra Babu, Sisay Tedesse and T. A. Lelisho
 31. DFT studies of molecular structure, equilibrium constant for keto-enol tautomerism and Geometrical isomerism (E-Z) of 2-amino-1-phenylpropan-1- one (Cathinone). Advances in Applied Science Research. (2013) 4(2),147.
N.Surendra Babu

32. Computational studies of solvent effects on structure and vibrational spectra of isoflavonoid 5,7-Dihydroxy-3-(4-hydroxyphenyl) chromen-4-one (Genistein) by ab initio HF and DFT methods. *Advances in Applied Science Research*. (2012) 3(6), 3916.
N. Surendra Babu and Teshome Abute Lelisho
33. Thermodynamic study of polymer-surfactant interaction in aqueous system. *Journal of Indian chem.soc.* (2006) 83,1.
N.Surendra Babu
34. Effect of polymer and temperature on the critical micellar concentration of aqueous sodium dodecyl sulfate – *Journal of Indian Chemical Society*.(2002) 79, 508.
N.Surendra babu and M.C.S.Subha
35. Miscibility and Interaction Studies of Poly (Vinyl Pyrrolidone) / Poly (Vinyl Alcohol) in Dimethyl Sulphoxide by Ultrasonic velocity and Viscosity. *J.Acou.Soc.Ind.*(2001) 29, 484.
A.Sadasiva Rao, B.Vijaya Kumar Naidu, M.Prasad, K.Chowdoji Rao, C.NagaMani, N.Surendra Babu and M.C.S Subha.
36. Ultrasonic velocity of binary liquid mixtures of triethylamine with cellosolves at 308.15 K. *J.Acou. Soc. India*. (2001) 29,261.
S.Bahadur Alisha, N.Surendra Babu and M.C.S.Subha B.V.K.Naidu and K.Chowdoji Rao
37. Equivalent conductance, Viscosity and Apparent molar volume studies of alkali metal propionates in propionic acid + ethanol mixtures at 30° C. *J. Indian Chem.Soc.*(2000) 77, 8.
B.Nagendra Prad, N.Surendra babu, M.C.S Subha and K.Chowdoji Rao.
38. Miscibility and interaction studies on polymer blends of poly (methacrylic acid) / Poly (vinyl pyrrolidone) by ultrasonic velocity, viscosity and refractometric methods. *J Acous.Soc. India*. (1999) 27, 367.
M.C.S.Subha, C. Nagamani, N.Surendra Babu, K.Chowdoji Rao and A.Sadasiva Rao, B.Vijaya Kumar Naidu
39. Ultrasonic Study of Binary liquid mixtures of isooctane with butylamine, sec-butylamine, tert-butylamine and di-butylamine at 308.15K. *International Conference and exhibition on Ultrasonics (ICEU-99)*.(1999),304.
S.Bahadur Alisha, N.Surendra Babu and M.c.S.Subha

CONFERENCE PAPERS

International Seminars

1. 1st International Virtual Congress (IVC-2014) organized by International Science Congress Association at Pacific University, Udaipur, Rajasthan, India, June 5th–10th, 2014.
2. 45th Annual Convention of Chemists 2008 and International Conference on Recent advances in Chemistry, held at the P.G. Department of studies in chemistry, Karnatak University, Dharwad 580003, Karnataka, organized by Indian chemical Society, Kolkata, during November 23-27, 2008.
3. 1999 Silver Jubilee year of Ultrasonic Society of India ICEU-99 International and Exhibition on Ultrasonics. New Delhi, India December 2-4, 1999.

4. International Conference on Pharmaceutical, Medical & Environmental Health Sciences (ICP pharmaME-2016). Organized by IRF (IRAJ Research FOURUM) at Tirupati, India, 21st August 2016.

National Seminars

1. National level conference Recent Trends Pharma Sciences and life sciences - 2016(NLCRTPLS-2016) Organized by Anveshana Educational and research Foundation at Hyderabad, INDIA. 28th August 2016.
2. National seminar on Role of chemistry in emerging areas of Biology and Industries (RCEABI-2006) , organized by Dep. Chemistry, S.K. University, Anantapur, India, March 24-25, 2006.
3. National Seminar on “New trends in Biotechnology and Perspectives” .Organized by Department of Biotechnology, S.K. University, Anantapur, India, Feb 17-18, 2006.
4. UGC National seminar on Drug Abuse in India, held in the Department of Chemistry, S.K. university, Anantapur, March 8- 9, 2002.
5. High Performance Polymers Sponsored by CSIR , NEW Delhi . Organized by Dept. of Polymer Science and Technology, S.K. University, Anantapur, India, 22th October 2000.
6. New Trends in Biochemistry and Bio technology, Conducted by Kuvempu University, Department of Studies in Biochemistry and Society of Biological Chemists, India, March 24th, 2001.
7. National seminar on Polymer research in industry and R&D organization. Organized by Tejpur University and IIT, Kharagpur, Calcutta, India, June, 26-27, 1998.
8. APT.98 National symposium on Advances in Polymer Technology. Organized by Department of Polymer Science and Rubber Technology, Kochi, India. March 27-28, 1998.
9. Recent trends in polymers-2016(RTP-2016). Organized by Department of Polymer Science and Technology, Sri Krishnadevaraya University, Anantapur, INDIA. 26th August 2016.

Workshops

1. Graduate Studies Supervisors’ workshop organized by The University of Dodoma, Tanzania held on 15-16 March 2017.
2. Training Workshop (Application of GIS, qPCR and Bioinformatic Analyses for Pathogen Discovery) held at the Nelson Mandela African Institution of Science and Technology (NM-AIST), Arusha, Tanzania, May 23 – June 03, 2016.
3. National Workshop on Protein Muddling Drug Targeted Proteins in Genomic Era Organized by Department of BioChemistry, held at S.K. University, Anantapur, India. 27-28 December 2008.
4. National workshop On Green Chemistry organized by Department of chemistry Osmania University, Hyderabad, India, January 24-25, 2006.

5. National workshop On Bioinformatics tools in design and optimization Drug like molecules, Organized by Department of Bio Chemistry, held at S.K.University, Anantapur, India, March 26-28 2006.
6. Instrumentation awareness programme for Research Scholars. Conducted by the Dept. of Instrumentation and University Science Information Centre (USIC) S.K.University, Anantapur, India, February, 18-20, 2000.
7. National workshop on Interstellar Molecules. Organized by Dept of Physics, S.K. University, Anantapur, India, October 29-31, 1999.
8. Advanced lecture series (Ph.D program). Organized by Nuclear Science Center, New Delhi, India, October ,1-16, 1998.
9. National workshop on Patent Awareness and Intellectual Property Rights. Sponsored by DST, New Delhi. Organized by Dept. of Polymer Science and Technology, S.K. University, Anantapur, India. 6th September 1998.

Memberships

1. Member in The Minerals, Metals & Materials Society (TMS), Pittsburg, Pa, USA
2. The solar energy of India
3. Chemical Society of Japan

Guest Lecturers

1. Department of bio technology, Sri Krishnadevaraya University, Anantapur, INDIA
2. Sri Krishnadevaraya University College of Pharmacy, Anantapur, INDIA
3. Dravidian University, Kuppam, INDIA
4. NNR & CL Degree College, Affiliated to Nagarjuna University, Guntur, INDIA
5. GBR Degree College (PG Courses) Affiliated to Andhra University, Vizag, INDIA

Administration experience

1. Member of Department Graduate Commission (DGC), Department of Chemistry, Hawassa University, Hawassa, ETHIOPIA.
2. Member of Department research and Development committee Department of Chemistry, Hawassa University, Hawassa, ETHIOPIA.
3. Member of Curriculum development team member, Department of Chemistry, The University of Dodoma, Tanzania.
4. A publication assessor, Department of Chemistry, The University of Dodoma, Tanzania.