# <u>Resume</u>

## NAME & ADDRESS: Dr. Swastika N. Das

Professor and Head, Department of Chemistry, BLDEA's V.P. Dr.P.G.Halakatti College of Engineering and Technology, Vijayapur-586103 Karnataka,INDIA



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Research gate link: <u>https://www.researchgate.net/profile/Swastika\_Das</u>

Vidwan Profile: https://vidwan.inflibnet.ac.in/profile/163926

## SCIENTIFIC RECORDS (Scopus)

- h-Index: 13
- Citations: 1,059
- Orcid Id: 0000-0001-8334-9336
- Scopus Id: 55348910900

## ACADEMIC BACKGROUND:

Qualification	Name of the university	Subject	Month & year of passing	Division	Percentage of marks obtained
Ph.D	Sambalpur University, Odhisa	Chemistry	1998	NA	NA
M.Phil	-do-	Chemistry	1993	A+	
M.Sc.	-do-	Chemistry	1990	Ist class 2 <sup>nd</sup> in the University	70.3
B.Sc. (Honors)	-do-	Chemistry (Hons) Physics, Mathematics	1988	1 <sup>st</sup> class with Distinction	66.6 in Chemistry (hons.)

<b>PROFESSIONAL EXPERIENCE:</b> Total 23 years and 6 months (t	till this dat	te)
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S.No	Name of the post	Name of the employer	From	То	Nature of
					job
1.	Professor of Chemistry	BLDE Association's	01.04.2009	till date	Teaching &
		V.P.Dr.P.G.Halakatti College of			Research
		Engineering & Technology, Vijayapur			
1.	Professor and Head of	BLDE Association's	2009 April	till date	Teaching &
	the Department of	V.P.Dr.P.G.Halakatti College of			Research
	Chemistry	Engineering & Technology, Vijayapur			
2.	Assistant Professor	do-	2004	2009	Teaching &
			March	March	Research
3.	Lecturer	-do-	2000 oct	2004	Teaching &
				March	Research
4.	Lecturer	SECAB ARSI College for Women,	June1998	Sept.	Teaching
		Vijayapur		2000	

### Dr. Swastika N. Das - Professional career / life sketch

Currently, I am a Professor and Head of the Department of Chemistry at B.L.D.E. A's V.P. Dr. P.G. Halakatti College of Engineering and Technology in Vijayapura, Karnataka, India. After earning a Master's degree in Physical Chemistry from Sambalpur University, Orissa in 1991, I pursued an M.Phil in Photochemistry. In 1998, I obtained my Ph.D. in Chemistry under the guidance of Prof.G.B. Behera at the same university. Since then, I have dedicated myself to teaching and mentoring undergraduate, postgraduate, and Ph.D. students while actively engaging in research and administration for over two decades.

In 2010, I established a research center within my department, which has been recognized by VTU, Belagavi. My research interests span electroanalytical chemistry, chemical kinetics, heavy metal toxicity, phytochemistry, and nanotechnology. As a co-PI on a DRDO project from 2004 to 2008, I investigated the impact of environmental pollutants such as nickel and chromium and studied the effectiveness of antioxidants like ascorbic acid and  $\alpha$ -tocopherol as chelators. The project focused on heavy metal pollution in rats and the role of antioxidants in mitigating its effects. I am also involved in the development of biosensors capable of detecting various organic pollutants in aqueous media. My research has been published in peer-reviewed journals from reputable publishers like Elsevier, Springer, Taylor and Francis, and De Gruyter.

Notable contributions I have made to the field include the development of a modified method for determining serum  $\alpha$ -tocopherol (DOI: 10.1515/jbcpp-2011-0033, Document attached) and the analysis of groundwater fluoride contamination and its potential health implications in Indi taluk of Vijayapura District (DOI: 10.1007/s10653-016-9869-2, Document attached). In recent years, I have explored the anti-diabetic properties of native plants from North Karnataka and discovered that a herb called Lactuca scariola Linn, found

in the Vijayapura District, exhibits promising anti-diabetic properties. Furthermore, I am investigating the use of green-synthesized nanoparticles for treating wastewater and leachates and development of new biosensors.

As a recognized Ph.D. guide at V.T.U. in Belagavi, Karnataka, I have supervised two students to the completion of their Ph.D., and two more are currently pursuing their doctorate under my guidance. I serve as a reviewer for peer-reviewed journals from publishers such as Elsevier, Springer, Wolters Kluwer, De Gruyter, and Hindawi, specializing in environmental pollution, health science, and electrochemistry. Additionally, I evaluate Master's Degree theses for North-West University in South Africa, and AICTE in New Delhi recently appointed me to review a Bengali book on Environmental Chemistry.

At present, I am the principal investigator for a VGST project (K FIST L1) focused on conducting electrochemical analyses of biologically active compounds using assimilated sensor electrodes. As part of this project, I am examining the potential for creating nanocomposites using various plant materials, with the goal of developing sensing materials capable of detecting biologically active molecules and organic/inorganic pollutants in aqueous solutions. To support this research, I have established a laboratory at my institution using VGST funds. Throughout my career, I have had the opportunity to collaborate with faculty members from international universities in Italy, Sri Lanka, the United States, and Singapore.

Beyond my professional pursuits, I am passionate about life and its many experiences. As an avid blogger, I have contributed over 200 articles to my website, www.revolvingaroundlife.com., sharing my insights, experiences, and reflections on various aspects of life. By engaging with colleagues and researchers worldwide and sharing my thoughts through blogging, I strive to foster a global community of learning and growth, enriching both my professional and personal life.

#### **Research Experience:**

- Worked as *Jr. Research Fellow* in the U.G.C. Project leading to Ph.D in Chemistry inSambalpur University, Orissa from 1992 to 1996 (04 years)
- Worked as *Co-Investigator* in DRDO Research Project on Metal Toxicities (2004-2008).
- Recognized Ph.D guide of VTU, Karnataka.
- PhD Supervisor (awarded): 02
- PhD Supervisor (at present) :02
- Principal Investigator of VGST project K-Fist L1 (GRD No.:771)

<u>Area of Research Interest:</u> Medicinal Chemistry, Chemical Kinetics, Metal Toxicity, Nanotechnology, Electrochemistry.

### **Membership of Professional Bodies:**

- Life member of Orissa Chemical Society. Membership No: LM663/05
- Life member of Society of Technical Education (ISTE), New Delhi, with membershipID: LM41971.

## Area of Professional Activity:

• Teaching Engineering Chemistry for last 23 years (Since 18.10.2000) in BLDEA's V.P. Dr. P.G.Halakatti College of Engineering and Tech., Vijayapura, Karnataka, India.

• Teaching Applied Environmental Chemistry and Microbiology in M.Tech Curriculum in BLDEA's

V.P. Dr. P.G.Halakatti College of Engineering and Tech., Vijayapura, Karnataka, India.

• Guiding Ph.D students in VTU recognized Chemistry Research centre of BLDEA's V.P. Dr.

P.G.Halakatti College of Engineering and Tech., Vijayapura, Karnataka, India.

- Head of the Department of Chemistry since 1st October 2008 to till date.
- Member, Board of Examiners (Chemistry), VTU Belgaum 2015-16 and 2020-21.

• Editor-in-Chief for College e-bulletin and yearly news bulletin news@bldeacet (2014- till date).

• Associate member of Karnataka Science and Technology Association (KSTA), Govt. of Karnataka, India.

- Mentor for First year students.
- Worked as Co-Investigator in DRDO Research Project on Metal Toxicities (2004-2008).

• Principal Investigator of project sanctioned by VGST (GRD No. 771/2019), Govt. of Karnataka, India.

• M.Sc thesis Evaluator of Northwest University, South Africa (2021)

• Member, selection committee for Professor in Northwest University, South Africa (2023).

### **Reviewer of the following Journals:**

- International Journal of Endocrinology (Hindawi)
- 3-Biotech (Springer)
- BLDE University Journal of Health Sciences (Wolters Kluwer)
- Environmental Science and Pollution Research (Springer Journal, IF: 4.223).
- The Journal of Pediatrics (Elsevier)
- Journal of Ethnopharmacology (Elsevier)
- Journal of Basic and Clinical Physiology (De Gruyter)

## **Contribution to National/International issues:**

A blogger who tries to create public awarenesson Environmental protection, parenthood, importance of education and different issues related towomen.

Blog site: www.revolvingaroundlife.com

## **Awards & Recognitions:**

- Associate Member of KSTA, Govt of Karnataka. (Annexure-8)
- Felicitated by BLDE Association twice on its Foundation Day for professional achievements.
- Received 'Woman in Science' Honour from Research Club, BLDE DU, on National Science

Day, 2020.

### **List of Publications:**

- Teradale, A. B., Chadchan, K. S., Ganesh, P. S., Das, S. N., & Ebenso, E. E. (2023). Synergetic effects of a poly-tartrazine/CTAB modified carbon paste electrode sensor towards simultaneous and interference-free determination of benzenediol isomers. React. Chem. Eng., (Royal Society of Chemistry). IF: 3.9, Q2.
- Honutagi RM, Sunil R, Patil SM, Bhosale S, Das SN, Parvatikar PP, Das KK. 2023 Mar-Apr; Protein-protein interaction of LDH and CRP-1 with hematotoxin snake venom proteins of all species of snake: An in silico approach. *Int J Health Sci.* 17(2):10-15., PMID: 36891039, [SCOPUS], Q4.
- Parvatikar PP, Patil SM, Patil BS, Reddy RC, Bagoji I, Kotennavar MS, Patil S, Patil AV, Das KK, Das SN, Bagali S, 2023. Effect of Mucuna pruriens on brain NMDA receptor and tau protein gene expression in cerebral ischemic rats. *Front Physiol.* 14:1092032. doi: 10.3389/fphys. 1092032. [JCR IF: 4.755]., [SCOPUS], Q1.
- Chadchan KS, TeradaleAB, Ganesh Pattan S, Das SN, 2022. Simultaneous sensing of mesalazine and folic acid at poly (murexide) modified glassy carbon electrode surface. *Materials Chemistry and Physics*. 290:126538.https://doi.org/10.1016/j.matchemphys.2022.126538, [JCR IF: 4.778] Citation index: 3., [SCOPUS], Q2.
- Teradale AB, Ganesh PS, Lamani SD, Swamy BEK, Das SN, 2021. Electrochemical investigation of allopurinol polymerised carbon paste electrode interface for epinephrine and folic acid sensing in pharmaceutical samples. *Materials Research Innovation*. 26(5):295-302. doi: 10.1080/14328917.2021.1975988.[SCOPUS], Q3.
- Chadchan KS, Das SN, Das KK, 2020. Hepato-Renal Protective Actions of Aqueous Lactucascariola Linn (Prickly Lettuce) leaves extract in Diabetic Rats. *Pravara Medical Review*. 12(3):100-107.[SCOPUS], Q4.

- Das SN, Reddy R Chandramouli, Chadchan KS, PatilArun J, Biradar MS, Das K K, 2020. Nickel and Oxidative stress: Cell Signaling Mechanisms and Protective Role of Vitamin C. *Endocrine, Metabolic & Immune Disorders Drug Targets*. 20(7):1024-1031. doi:10.2174/1871530319666191205122249. [JCR IF: 2.387]. Citation index: 16, [SCOPUS], Q3.
  - Teradale AB, Lamani SD, Ganesh PS, Kumara Swamy BE, Das SN, 2019. Poly- nile Blue Based Electrochemical Sensor for Catechol and Hydroquinone. *Anal BioanalElectrochem*. 11(9):1176-1190. [SCOPUS], Q4.
  - Teradale AB, Ganesh PS, Kumara Swamy BE, Das SN, 2018. Application of Poly (nicotinamide) Modified Carbon Paste Electrode Sensor for the Electrocatalytic Determination of Acetaminophen and Folic Acid. *Analytical and Bio Analytical Electro Chemistry*. 10(2):203-219.[SCOPUS], Q4.
  - Teradale AB, Lamani SD, Ganesh PS, Kumara Swamy BE, Das SN, 2018. Electrochemical Sensor for the Determination of Paracetamol at Carbamazepine Film Coated Carbon Paste Electrode. *Zeitschriftfür Physikalische Chemie*. doi: 10.1515/zpch-2017-0992. [JCR IF-4.315], Citation index: 6. [SCOPUS], Q2.
  - 11. Das KK, Reddy CR, Bagoji IB, Das SN, Bagali S, Mullur L, Khodnapur JP, Biradar MS, 2018.
    Primary concept of nickel toxicity an overview. *J Basic Clin Physiol Pharmacol*, 30(2): 141–152. doi: <u>https://doi.org/10.1515/jbcpp-2017-0171</u>. [JCR IF: 2.253] Citation index: 151, [SCOPUS], Q3.
  - Teradale AB, Lamani SD, Ganesh PS, Swamy Kumara BE, Das SN, 2017. CTAB immobilized carbon paste electrode for the determination of mesalazine: A cyclic voltammetric method. *Sensing and Bio-Sensing Res.* 15:53-59. https://doi.org/10.1016/j.sbsr.2017.08.001

#### [JCR IF: 4.461], Citation index: 27.,[SCOPUS], Q2.

- 13. Teradale AB, Lamani SD, Ganesh PS, Kumara Swamy BE, Das SN, 2017. Niacin Film Coated Carbon Paste Electrode Sensor for the Determination of Epinephrine in Presence of Uric Acid: A Cyclic Voltammetric Study. *Anal Chem Lett.* 7(6):748-764.,[SCOPUS].
- 14. Chadchan KS, Das SN, Jargar JG, Das KK, 2017. A comparative study on Anti-diabetic effects of aqueous Trigonellafoenumgraecum, Hibiscus cannabinus Linn, and Cicer arietinum extracts on Alloxan induced Diabetic Male Albino Rats. *J Young Pharm.* 9(2):230-3., [SCOPUS], Q3.
- 15. Das KK, Chadchan KS, Reddy RC, Biradar MS, Kanthe P, Patil BS, Ambekar JG, Bagoji IB, Das SN, 2017. Effects of some indigenous plants of north Karnataka (India) on cardiovascular and glucose regulatory systems in diabetic rats. *CardiovascHematol Agents Med Chem.* 15(1):49-61.doi: 10.2174/1871525715666170712121347.,[SCOPUS], Q3.
- 16. Teradale AB, Lamani SD, Das SN, 2016. Spectrophotometric study of Osmium (VIII) Catalysed Oxidation of Carbamazepine by Permanganate Ions in Aqueous Acidic Medium: A Kinetic and Mechanistic Approach. J Adv Chem Sci. 2(2):261-266.,[SCOPUS].
- Ugran V, Desai N, Chakraborti D, Masali KA, Mantur P, Kulkarni S, Deshmukh N, Chadchan KS, Das SN, Tanksali AS, Arwikar AS, Guggarigoudar SP, Vallabha T, Patil SS, Das KK, 2016. Groundwater fluoride contamination and its possible health implications in Indi taluk of Vijayapura District (Karnataka State), India. *Environ Geochem Health*.39:1017–1029. doi: 10.1007/s10653-016-9869-2.[JCR IF: 4.932] Citation Index- 33, [SCOPUS], Q1.
- Teradale AB, Lamani SD, Das SN, 2016. Up Growth Effect of Cetyltrimethyl Ammonium Bromide with Carbon Paste Electrode for the Electrochemical Determination of Allopurinol and Its Biological Activities. *Anal BioanalElectrochem*. 8(7):814-829., [SCOPUS], Q3

- Teradale AB, Lamani SD, Kumara Swamy BE, Ganesh PS, Das SN, 2016. Electrochemical Investigation of Catechol at Poly(niacinamide) modified Carbon Paste Electrode: A Voltammetric Study. *Adv Phys Chem.* 2016(1):1-8. doi: org/10.1155/2016/8092860.,[SCOPUS], Q4.
- 20. Chadchan KS, Jargar JG, Das SN, 2016. Anti-diabetic effects of aqueous prickly lettuce (Lactucascariola Linn) leaves extract in alloxan induced male diabetic rats treated with nickel (II). *J Basic ClinPhysiolPharmacol.* 27(1):49-56. [JCR IF-2.253] Citation index:4. [SCOPUS], Q3.
- 21. Chadchan KS, **Das SN**, Das KK, **2014**. Fenugreek (Trigonellafoenumgraecum) leaves extract and its interaction with heavy metal (Nickel II) with reference to glucose reduction capabilities in-vitro. *Biomedicine*. 34(1):104-108. **[IF-0.109],[SCOPUS], Q3.**
- 22. Das KK, Jargar JG, Hattiwale SH, Yendigeri SM, Das SN, Dhundasi SA, 2013. Serum Vitamin E (alpha-Tocopherol) Estimation. A Potential Biomarker of Antioxidant Status Evaluation on Heavy Metal Toxicities. *Recent Patents on Biomarkers*, 3, 36-43.,[SCOPUS].
- 23. Maniyar SA, Jargar JG, Das SN, Dhundasi SA, Das KK, 2012. Alteration of chemical behavior of L-ascorbic acid in combination with nickel sulfate at different pH solutions in vitro. *Asian Pacific J Trop Biomed*, 2(3), 220-2. [JCR IF: 1.514], Citation index: 14. [SCOPUS], Q3.
- 24. Jargar JG, Hattiwale SH, Das SN, Dhundasi SA, Das KK, 2012. A modified simple method for determination of serum α-tocopherol (vitamin E). *J Basic ClinPhysiolPharmacol*, 23(1), 45-8.
  PMID: 22865449, DOI: 10.1515/jbcpp-2011-0033. [JCR IF: 2.253] Citation index:31.
  [SCOPUS], Q3
- 25. Das KK, Dhundasi SA, **Das SN**, **2011**. Hexavalent chromium and its effect on health: possible protective role of garlic (Allium sativum Linn). *J Basic ClinPhysiolPharmacol*, 22(1-2), 3-10.

#### [JCRIF-2.253] Citation index:7.[ SCOPUS], Q3

- 26. Das KK, **Das SN**, Dhundasi SA, **2008**. Nickel, its adverse health effects & oxidative stress. *Indian J Med Res*, 128(4), 412-25. **[JCR IF: 5.274] Citation index: 758.[ SCOPUS], Q1.**
- 27. Gupta AD, Das SN, Dhundasi SA, Das KK, 2008. Effect of garlic (Allium sativum) on heavy metal (nickel II and chromium VI) induced alteration of serum lipid profile in male albino rats. *Int J Environ Res Public Health*, 5(3), 147-51. [JCR IF :4.614], Citation index:44[ SCOPUS], Q1.
- 28. Das KK, Gupta AD, Dhundasi SA, Patil AM, Das SN, Ambekar JG, 2007. Protective role of L-ascorbic acid on antioxidant defense system in erythrocytes of albino rats exposed to nickel sulfate. *Biometals*, 20(2), 177-84. [JCR IF: 3.378], Citation index: 45.[ SCOPUS], Q1.
- 29. Das KK, Gupta AD, Dhundasi SA, Patil AM, **Das SN**, Ambekar JG, **2006.** Effect of L-ascorbic acid on nickel-induced alterations in serum lipid profiles and liver histopathology in rats. *J Basic ClinPhysiolPharmacol*, 17(1), 29-44. [JCR IF: 2.253], Citation index: 31.[ SCOPUS], Q3
- 30. Gupta AD, Patil AM, Ambekar JG, **Das SN**, Dhundasi, SA, Das KK, **2006.**L-ascorbic acid protects the antioxidant defense system in nickel-exposed albino rat lung tissue. *J Basic ClinPhysiolPharmacol*, 17(2), 87-100.[**JCR IF: 2.253**], **Citation index: 21.[ SCOPUS]**, **Q3**
- 31. Das KK, Das SN, 2004. Studies on the role of ascorbic acid on nickel induced hepatic nucleic acid concentrations in rats. *J Basic ClinPhysiolPharmacol*, 15(3-4), 185-95. [JCR IF: 2.253], Citation index: 11.[ SCOPUS], Q3.
- 32. Das SN, Panda M, 2003. Quenching of rhodamine-B fluorescence by metal ions. *Asian J Spectroscopy*. 7(2):87-92.

33. Das KK, Das SN, Dasgupta S, 2001. The influence of ascorbic acid on nickel-induced hepatic lipid peroxidation in rats. *J Basic ClinPhysiolPharmacol*, 12(3), 187-95. [IF: 2.253], Citation index: 100 .[ SCOPUS], Q3.

#### **Book Chapters:**

- a. Hypoxia And Oxidative Stress: Cell Signalling Mechanisms And Protective Role of Vitamin C and Cilnidipine. Kusal K Das, Swastika N. Das and Jeevan G. Ambekar. In: Lipid Peroxidation: Inhibition, Effects and Mechanisms Nova Science Publishers, Inc. USA ISBN: 978-1-53610-506-3, 2016.
- b. Das KK, Das SN, Dhundasi SA. Nickel: Molecular Diversity, Application, Essentiality and Toxicity in human health. In Gaillard Blanc and Damien Moreau (Eds) in Biometals,: Molecular Structures, Binding Properties and Applications, ISBN 978-1-60876-852-3;New York, USA, Nova Science Publishers Inc; 2010
- c. Heavy Metals and Low-Oxygen Microenvironment—Its Impact on Liver Metabolism and Dietary Supplementation. Kusal K Das, Rajesh Honnutagi, Lata Mullur, R Chandramouli Reddy, Swastika Das, Dewan Syed Abdul Majid, MS Biradar. Dietary Interventions in Liver Disease., 2019, 315-332. (Academic Press). ISBN: 978-0-12-814466-4.

#### **Doctoral Theses Guided:**

1. Study on Antidiabetic effects of aqueous extract of some indigenous plants available in North Karnataka and their interaction with some heavy metals. (VTU, Belagavi,2018)

2. Electroanalytical assessment of some biologically active compounds by developing biosensors. (VTU, Belagavi,2020)