

BRIEF PROFILE

Dr. (Mrs.) SUNITHA B. MATHEW

**Assistant Professor, Department of Chemistry,
Govt. V. Y. T. PG Autonomous College, Durg (C. G.)**

Educational Profile

Academic:

AISSCE (XII- Bio Group), 1986
CBSE, New Delhi.

First Division
(MGM Sr. Sec. School, Bhilai, CG)

B. Sc. (Chemistry, Botany, Zoology), 1988
Pt. Ravishankar Shukla University, Raipur

First Division
(St. Thomas College, Bhilai, CG)

M. Sc. (Chemistry), 1990
Pt. Ravishankar Shukla University, Raipur

First Division
(UTD, Pt. RS University, Raipur, CG)

Ph. D., 2008
Pt. Ravishankar Shukla University, Raipur
(Govt. V.Y.T. PG Autonomous College, Durg, CG)

Professional:

B. Ed. 1992
Pt. Ravishankar Shukla University, Raipur
First Division
(Kalyan PG College, Bhilai, CG)

MeritPositions

- Ninth position in the order of merit in **M.Sc., Pt. Ravishankar Shukla University**
- Tenth position in the order of merit in **Pre- B.Ed. Entrance Examination, M.P. Professional Examination Board (VYAPAM)**
- Second position in the order of merit in **B.Ed., Pt. Ravishankar Shukla University Raipur**
- First position in B.Ed., **Kalyan College, Bhilai**

Experience Summary

Teaching:

- As Honorary Assistant Professor of Chemistry at Kalyan PG Mahavidyalaya, Bhilai Nagar since 10.10.91 to 09.03.92 and 17.08.92 to 15.03.93
- As Assistant Professor in Chemistry (**PSC, M.P.**) since 19.10.93 till date.

Research:

- Engaged in Research work since 09.01.03
- Awarded Ph. D. in Chemistry (2008) on the title “Characterization and evaluation of some commonly occurring pollutants in residential environment”
- Registered as guide at Pt. RS University, Raipur and Hemchand Yadav University, Durg
- Reviewer of several journals

Administrative Contributions:

- Assistant Controller Autonomous Examination Cell (2014-2020)
- Member, Interview Committee, Statue 28, Hemchand Yadav University, Durg
- External member IQAC Cell, St. Thomas College and Govt. College, Machandur
- Member IQAC Cell (2010-2014)
- Member IQAC Cell (2020 – till date)
- Member NIRF submission committee
- Preparation of IDP and District Plan, RUSA
- Preparation of SSR for NAAC
- Secretary/Joint secretary/member of organizing committees of International/ National Conferences/Seminars/Workshops/Webinars
- Coordinator/member of Science Day Quiz Competition
- Observer, VYAPAM Examinations
- Evaluator, CGPSC Examinations

Extension Contributions:

- Chaired technical session
 - All India Conference on Digital Engineering, AICON-17, CSIT, Durg, 22 April 2017
 - National Conference on Chemical Science: Innovations & Challenges in Twenty First Century, AICON-11, 29th Jan. 2011 CSIT, Durg
- Judge
 - Interschool debate competition, MGM School, Bhilai, 09.12.2004.
 - Interschool debate competition, MGM School, Bhilai 02.01.2010.
 - Interschool Science Model display competition St. Xaviers School, Durg 21.11.2009
- Invited lectures
 - Govt. College, Kairagarh
 - Govt. College, Vaishali Nagar
 - Govt. Digvijay College, Rajnandgaon
 - Govt. Dr. W. W. Patankar Girls College, Durg

Research Project completed:

UGC sponsored Minor Research Project entitled, 'Oxidative Degradation of some harmful pesticides- Kinetic Study' (2014-16)

Research Scholars:

1. Surbhi Lilhare: Studies on Spectrophotometric Determination of Some Common Toxicants and its Adsorption Models(**Thesis Submitted**)
2. Priya Singh: Synthesis and characterization of organic nanoparticles using microemulsion method

Research Publications:

1. A novel chromogenic scheme for the determination of Cu(II) in water samples, *Analytical Chemistry Letters* 11:6 (2021) 872-885.
2. Calcium alginate beads with entrapped iron oxide magnetic nanoparticles functionalized with methionine- a versatile adsorbent for arsenic removal, *Nanomaterials* 11:1345 (2021) 1-21.
3. A simple spectrophotometric study of adsorption of Hg(II) on glycine functionalized magnetic nanoparticle entrapped alginate beads, *International Journal of Environmental Analytical Chemistry* (2021) 1-21.
4. Selective spectrophotometric method for the determination of mercury (II) in water samples, *Analytical Chemistry Letters* 10:5 (2020) 654-666.
5. Kinetic determination of trace amount of mercury (II) in environmental samples, *Microchemical Journal* 128 (2016) 55-61.
6. A novel and sensitive kinetic method for the determination of malathion using chromogenic reagent, *Microchemical Journal* 113 (2014) 83-89.
7. Determination of nimesulide in pharmaceutical and biological samples by a spectrophotometric method assisted with the partial least square method, *Research on Chemical Intermediates* 39 (8)(2013)3553-3563.
8. Sensitive spectrophotometric determination of thallium (I) using rhodamine B hydrazide in micellar medium, *Analytical methods* 3(2011) 1546-1551.
9. Direct and selective spectrophotometric method for the determination of vanadium in steel, environmental and biological samples, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 81 (2011) 774-777.
10. Spectrophotometric determination of hydrogen peroxide using leucocrystal violet in micellar medium, *Journal of Dispersion Science and Technology* 30 (2009) 609–612.
11. Determination of atrazine in environmental and biological samples using solid phase extraction and spectrophotometry *Journal of Analytical Chemistry*, 64:4 (2009) 386-390.
12. Determination of nitrite and nitrogen dioxide by spectrophotometry after solid phase extraction, *Acta Chim. Slov.* 55 (2008) 236–242.
13. A simple and sensitive method for the determination of carbon disulphide in environmental and biological samples, *Indian Journal of Chemical Technology* 15 (2008) 306-309.
14. A rapid spectrophotometric assay of some organophosphorus pesticide residues in vegetable samples, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 67: 5 (2007) 1430-1432.

15. Microwave assisted spectrophotometric method for the determination of copper using leucocrystal violet, *Bull. Chem. Soc. Ethiop.* 21:1 (2007) 129-134.
16. Spectrophotometric method for the determination of saccharin in food and pharmaceutical products, *Indian J. Pharm. Sci.* 68:6 (2006) 821-823.
17. Modified spectrophotometric determination of total chlorine using leucocrystal violet, *Chemical and Environmental Research* 14:3&4 (2005) 305-308.
18. Spectrophotometric determination of nitrogen dioxide in the environment, *Journal of Indian Chemical Society* 81 (2004) 522-524.
19. Colorimetric determination of traces of nitrate in various environmental and commercial samples, *Chemical and Environmental Research* 13:1&2 (2004) 111-113.

Paper in Proceedings

Spectrophotometric method for determination of Carbaryl, *Proceedings of National Seminar in Chemistry "Recent Trends in Chemical Sciences and Future Prospects"* 2012, p. 124 (ISBN-978-93-81583-41-8)

Chapter in Edited Book

Extractive spectrophotometric determination of saccharin, *Environmental Science and Technology in India*, 2008, pp.227

Papers in Conferences/Seminars/Congress/Workshops

1. Spectrophotometric method for determination of Carbaryl, Proceedings of National Seminar in Chemistry "Recent Trends in Chemical Sciences and Future Prospects" 2012
2. A Sensitive Spectrophotometric Method for the Determination of Organophosphorus Pesticide Residue in Vegetable Samples, Indian Council of Chemists, 24th Annual Conference, Ranchi, 2005, AO-1.
3. A Sensitive Spectrophotometric Method for the Determination of Vanadium using Leucocrystal violet and its Applications, 92nd Indian Science Congress, Ahmedabad, 2005, Abstr. No. 178.
4. Extractive spectrophotometric determination of saccharin, National Seminar on New Horizons in Environmental Sciences and Engg. in India, Bangalore, Nov. 2004, Abstr.No.4.
5. Spectrophotometric Determination of Copper using Microwave and its Applications, Indian Council of Chemists, 23rd Annual Conference, Mumbai, 2004, AO-21.
6. Spectrophotometric determination of total and free available chlorine using leucocrystal violet and its application, 40th Annual Convention of Chemists, Jhansi 2003, Abstr. No. Anal-37
7. Modified method for spectrophotometric determination of hydrogen peroxide using leucocrystal violet in environmental samples, 22nd Annual Conference, Roorkee, 2003, AO-16.

Conferences/Seminars/Congress/Workshops Attended

- 56th Annual Convention of Chemists-2019 and International Conference on Recent Trends in Chemical Sciences, ICS, Pt. Ravishankar Shukla University, Raipur, 14-16 Nov. 2019

- Workshop on Evaluation Reforms in Higher Education, UGC, Bhopal, 24 – 25 Oct. 2019
- Prof. Dinesh Varshney Memorial National Conference on Physics and Chemistry of Materials, Govt. Holkar Sc. College, Indore and School of Physics, Devi Ahilya University, Indore, 27-28 Dec. 2018
- International Conference on Multifunctional Advanced Materials, Kamla Nehru Mahavidyalaya, Nagpur and Dharampeth M.P. Deo Memorial Science College, Nagpur, 5-7 Oct. 2018
- 16th Chhattisgarh Young Scientist Congress – 2018, Organizing Committee Member, CCOST, Raipur and Durg University, Durg, 27–28 Feb. 2018
- National Seminar on Current Development of Environmental Sciences in Chhattisgarh State, Bhilai Mahila College, Bhilai, 30 Nov. – 01, Dec. 2017
- All India Conference on Digital Engineering, AICON-17, CSIT, Durg, Invited Talk & Session Chair, 22 April 2017
- National Workshop on Emerging Trends of Chemicals in Human Life, Govt. W.W. Patankar Girls PG College, Durg, 06 Feb. 2017
- National Workshop on Research Methodology, Govt. V.Y.T. PG Autonomous College, Durg, 16-17 Dec. 2016
- International Conference on Recent Trends in Science and Engineering, Govt. V.Y.T. PG Autonomous College, Durg, 15-16 Jan. 2016
- National Workshop on Nano- Chemistry, Kalyan PG College, Bhilai, 8-9 Jan. 2016
- National Seminar on Energy Harvesting Materials and Techniques for Sustainable Development, Govt. V.Y.T. PG Autonomous College, Durg, 2-3 Dec. 2015
- Workshop on Green Chemistry and its Future Prospects, Organizing Committee, Govt. V.Y.T. PG Autonomous College, Durg, 30 Nov. 2015
- National Workshop on Chhattisgarh mei Naxalwad: Samasya aur Prabhav, Govt. V.Y.T. PG Autonomous College, Durg, 26 Nov. 2015
- National Seminar on Green Chemistry, Bhilai Mahila Mahavidyalaya, Bhilai, 28-29 Oct. 2015
- Workshop on CBCS, Pt. Ravishankar Shukla University, Raipur, 7 Apr. 2015
- International Conference on Status of Science and Technology in Chhattisgarh State, BIT, Durg, 19 -20 Mar. 2015
- National Workshop on Quality Enhancement through Innovations in Teaching, Learning, Evaluation and Implementation of Healthy Practices, 8-9th Feb. 2013
- National Seminar on Emerging Trends in Chemical Sciences, 18-19th Nov. 2011
- 47th Annual Convention of Chemists-2010 & International Conference on Recent Advances in Chemical Sciences, SoS in Chemistry, Pt. RS University, Raipur, 23-27th Dec. 2010
- National Seminar on Recent Trends in Chemical Sciences and Future Prospects, 10-11th Oct. 2011
- National Symposium on Fundamental and Analytical Aspects of Self Organising Systems, Kalyan PG College, 8-10th Mar. 2007
- 92nd Indian Science Congress, Ahmedabad, 2005

FDP/e-Workshops Attended:

- FDP in Pedagogical Training, 1-6 July 2020, SRTM University Nanded, Maharashtra
- FDP in Online Education, 22-31 July 2020, Hemchand Yadav University, Durg, CG
- FDP in ICT tools, 10-21 August 2020, Electronics and ICT Academy
- FDP in ICT tools in Teaching Chemistry, 2-6 September 2020, St. Teresas College, Kerala

- FDP in Quantum Mechanics, 18-23 January 2021, St. Teresas College, Kerala
- FDP in Hands on with ICT tools, 10-21 August 2020, Atal Bihari Vajpayee University, Bilaspur, CG
- Symposium on NAAC Accreditation process 23-30 November 2020 BMS College for Women, Bengaluru
- Workshop on Adoption of open educational resources OER in PSSOU, Bilaspur, 28-30 September 2020, Pt. Sunderlal Sharma (Open) University, Bilaspur and Commonwealth Educational Media Center for Asia CEMCA, New Delhi
- Workshop on NAAC accreditation, Health Hygiene and Legal awareness, 7-16 May 2021, Hemchand Yadav University, Durg
- Workshop on Intellectual property rights, 3-9 May 2021, Govt. V. Y. T. PG Autonomous College, Durg
- FDP on Research and teaching methodology, 5-11 July 2021, Govt. V. Y. T. PG Autonomous College, Durg
- Workshop on Analytical Instruments, 15-17 June 2020, Dr. C. V. Raman University, Bilaspur
- Workshop on Yoga from home through heartfulness meditation, 20-22 June 2020, Govt. V. Y. T. PG Autonomous College, Durg

**Contribution in
Conferences/Seminars/Congress/Workshops/Events Organized as
Organizing Secretary/Joint Secretary/Organizing Committee member:**

- International Webinar on Role of Functional Nanomaterials in Combating Covid-19 Pandemic 29-30 Oct. 2020
- National e-Workshop on Prospects of Blended Learning Beyond Covid-19 25-26 June 2020
- Three Day International Webinar on World Environment Post Covid-19: Prospects and Challenges for Sustainable Development on the occasion of World Environment Day, 2020 5th - 7th June 2020
- International Conference on Materials and Environment, 24-25 Jan. 2020
- International Year of Periodic Table (IYPT), 2019
- Organizing Committee Member, 16th Chhattisgarh Young Scientist Congress – 2018, CCOST, Raipur and Durg University, Durg, 27–28 Feb. 2018
- International Conference on Recent Trends in Science and Engineering, 15-16 Jan. 2016
- Workshop on Green Chemistry and its Future Prospects, Organizing Committee, 30 Nov. 2015
- International Year of Chemistry, 2011
- National Seminar on Recent Trends in Chemical Sciences and Future Prospects, 10-11th Oct. 2011

Life member:

- Life member, Indian Chemical Society, Kolkata
- Life member, Indian Science Congress Association

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