

Personal Information

Name	Dr. V.Madhavi
Years of Experience	Teaching: 15 Years Research: NIL Industry: NIL
Email Id	Madhavi.v@bvrithyderabad.edu.in
Areas of Specialization	Nanotechnology



Educational Qualifications

Doctoral Degree	Ph.D.	Nanotechnology
PG Degree	M.Sc.	Environmental Chemistry
UG Degree	B.Sc.	M.P.C.

Funded Projects

The project entitled “Synthesis of Graphene from agricultural waste as green substitute and its application in remediation of heavy metals in waste water” has been sanctioned under the collaborative scheme, TEQIP-III, JNTUH (2019).

Patent

Pretreated rice husk for the sustainable Graphene oxide for adsorptive removal of chromium from water. (Grant No.410482)

Books Publishes / Book Chapters / Monographs:

Book Published

Zerovalent nanoiron in remediation of Cr(VI) contaminated sites

Book chapters published

1. **V. Madhavi** | A. Vijaya Bhaskar Reddy | G. Madhavi. Synthesis, characterization, and properties of carbon nanocomposites and its application in wastewater treatment. In: Environmental Remediation through Carbon Based Nano Composites Springer Nature, 2020, ISBN 978-981-15-6698-1

2. A. Vijaya Bhaskar Reddy | M. Moniruzzaman | **V. Madhavi** | J. Jaafar Recent improvements in extraction, cleanup and quantification of bioactive flavonoids. In: Studies in Natural Products Chemistry, Elsevier Publishers, 2020, Volume 66, ISBN: 978-0-12-817907-9, pg no. 197-224.
3. A. V. Bhaskar Reddy | M. Moniruzzaman | **V. Madhavi** | T. Aminabhavi | G. Madhavi. Heavy metals removal using carbon based nanocomposites. In: Environmental Remediation through Carbon Based Nano Composites, Springer Nature, 2020, ISBN 978-981-15-6698-1
4. A. Vijaya Bhaskar Reddy | M. Moniruzzaman | **V. Madhavi** | G. Madhavi Recent prospects on removal of heavy metal pollutants from wastewater using zerovalent iron nanoparticles. In: Handbook of Water Pollution and Remediation Technology (Accepted) Springer Publishers
5. **Madhavi Vemula** and Vijay Bhaskar Reddy Ambavaram Potentialities of bionanocomposite hydrogels for wastewater treatment. In: Bionanomaterials for Environmental and Agricultural Applications, IOP Publishers 2021, Online ISBN: 978-0-7503-3863-9
6. **V. Madhavi** | A. Vijaya Bhaskar Reddy | G. Madhavi Nanosorbents for the removal of heavy metal pollutants In: Nano-Bioremediation : Fundamentals and Applications. A volume in Micro and Nano Technologies, Elsevier, 2022, pg No. 363-387 doi.org/10.1016/B978-0-12-823962-9.00004-0
7. Konkanchi, R., **Vemula, M.**, Safala, B.A.T. (2023). EGFR and HER2 Target-Based Molecular Docking Analysis—Computational Study of Metal Complexes. In: Bhateja, V., Mohanty, J.R., Flores Fuentes, W., Maharatna, K. (eds) Communication, Software and Networks. Lecture Notes in Networks and Systems, vol 493. Springer, Singapore. https://doi.org/10.1007/978-981-19-4990-6_18
8. **Madhavi, V.**, Ramesh, T. (2023). Introduction and Basic Principle of Nanofiltration Membrane Process. In: Ahmad, A., Alshammari, M.B. (eds) Nanofiltration Membrane for Water Purification. Sustainable Materials and Technology. Springer, Singapore. https://doi.org/10.1007/978-981-19-5315-6_1
9. Ramesh, T., **Madhavi, V.** (2023). Nanocomposite Materials for Dye-Sensitized Solar Cells. In: Malik, J.A., Sadiq Mohamed, M.J. (eds) Modern Nanotechnology. Springer, Cham. https://doi.org/10.1007/978-3-031-31104-8_14

Papers Published

International Journal Publications

1. **Dr.V.Madhavi** published paper entitled “ Insights into nanocomposite materials for gas sorption applications” 2024, Nano-Structures & Nano-Objects, Vol 38, 101127

2. **Dr.V.Madhavi** published paper entitled “A Review on Graphene Analytical Sensors for Biomarker-based Detection of Cancer” 2024, Current Medicinal Chemistry, Bentham Science Publishers, Vol 31, Pp. 1464-1484
3. **Dr.V.Madhavi** published paper entitled “Polymeric nanoparticles as effective delivery systems in agriculture sustainability” *Nanotechnol. Environ. Eng.* **8**, 805–814 (2023). <https://doi.org/10.1007/s41204-023-00319-8>
4. **Dr.V.Madhavi** published paper entitled “Sorption Removal of Methylene Blue Dye from Aqueous Solution by Powdered Yellow Flame Tree Flower (*Peltophorumpterocarpum*)” 2023. Letters in Applied Bionanosceince
5. **Dr.V.Madhavi** published paper entitled “Modelling of experimental Cr(VI) adsorption on Acid and Alkali pretreated rice Husk-Graphene Oxide”Materials Today: Proceedings, 2020, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2020.08.378>.
6. **Dr.V.Madhavi** published paper entitled “Green Synthesis of Silver nanoparticles by Luffaacutangula peel extract and their anti-microbial activity” ,The International Journal of Global Sciences (tijogs), ISSN: 2663-015X Vol. 2(1) Jan-March, 76-81; 2019
7. **Dr.V.Madhavi** published paper entitled “Advances in drug delivery: Impacts of Genomics and role of Analytical Instrumentation” , Journal of Current Drug Discovery Technologies, ISSN: 1875-6220, 2016.
8. **Dr.V.Madhavi** published paper entitled “Controlled Release fertilizers-An Overview”, Journal of Global Agriculture and Ecology. 2016 ISSN: 2454-4205
9. **Dr.V.Madhavi** published paper entitled “Application and adsorption study of phytogetic zero valent nano iron particles in the reduction of hexavalent chromium” , *Spectrochimicaacta A:Molecular and Biomolecular Spectroscopy*. 116 (2013) 17-25.
10. **Dr.V.Madhavi** published paper entitled “Conjuctive effect of CMC-Zero valent iron nanoparticles and FYM in the remediation of chriomium contaminated soils”, *Journal of Applied nanoscience*, 2013, DOI 10.1007/s13204-013-0221-1.
11. **Dr.V.Madhavi** published paper entitled “An Overview on Research Trends in Remediation of Chromium”, Review,*Research Journal of Recent Sciences*, 2013, 2(1), 71-83.

12. **Dr.V.Madhavi** published paper entitled “Synthesis and spectral characterization of iron based micro and nanoparticles”, *International Journal of nanomaterials and Biostructures*, 2013
13. **Dr.V.Madhavi** published paper entitled “Plant growth promoting potential of nano-bioremediation under Cr(VI) stress”, *International Journal of Nanotechnology and Application (IJNA)* ISSN 2277-477 ,Vol. 3, Issue 3, Aug 2013, 1-10
14. **Dr.V.Madhavi** published paper entitled “Remediation of chlorpyrifos contaminated soils by laboratory synthesized Zero-valent Nano Iron Particles: Effect of pH and aluminium salts”. *Journal of Chemistry*, 2013.
15. **Dr.V.Madhavi** published paper entitled “Electrochemical investigations of Lipase Enzyme Activity inhibition by Methyl Parathion pesticide: A Voltammetric studies”, *Molecular Liquids* 2013(180):26-30.
16. **Dr.V.Madhavi** published paper entitled “Liquid chromatography-tandem mass spectrometry method for simultaneous quantification of urapidil and aripiprazole in human plasma and its application to human pharmacokinetic study”, *Biomedical Chromatography* 2013. DOI 10.1002/bmc.2882.
17. **Dr.V.Madhavi** published paper entitled “A selective and sensitive UPLC-MS/MS approach for trace level quantification of four potential genotoxic impurities in zolmitriptan drug”, *Journal of Pharmaceutical and Biomedical Analysis*, Vol, 84, 84-89, 2013
18. **Dr.V.Madhavi** published paper entitled “Systematic Approach for Trace Level Quantification of 2-n-butyl-4-spirocyclopentane-2-imidazole-5-one Genotoxic Impurity in Irbesartan using LC-MS/MS,” *Indian Journal Of Pharmaceutical Sciences*, 2013.
19. **Dr.V.Madhavi** published paper entitled “Simultaneous determination of asenapine and valproic acid in human plasma using LC–MS/MS: Application of the method to support pharmacokinetic study”, *Journal of pharmaceutical analysis*, ISSN 2095-1779, 2013
20. **Dr.V.Madhavi** published paper entitled “A simple method for the determination of efficiency of stabilized Fe⁰ nanoparticles for detoxification of chromium (VI) in water.” *Journal of Chemistry and Pharmaceutical Research*, 2012, 4(3) : 1539-1545.
21. **Dr.V.Madhavi** published paper entitled “Nanoprocess For Water Purification, Review”, *International Journal of Current Research Reviews*, 2012, 4(18) : 38-53.

22. **Dr.V.Madhavi** published paper entitled “Degradation of chlorpyrifos in aqueous solutions with chitosan-stabilized Fe⁰nanoaparticles.” *International Journal of Science Innovations and Discoveries*, 2012, 2(1) : 106-112.
23. **Dr.V.Madhavi** published paper entitled “Application of Carrageenan Stabilized Fe⁰ Nanoparticles for the Degradation of Chlorpyrifos in water.” *International Journal of Research in Chemistry and Environment*, 2012, 2(2) : 173-177.
24. **Dr.V.Madhavi** published paper entitled “Method development and validation study for quantitative determination of 2-chloromethyl-3,4-dimethoxy pyridine hydrochloride a genotoxic impurity in pantoprazole active pharmaceutical ingredient (API) by LC/MS/MS.” *Journal of Pharmaceutical and Biomedical Analysis*, 2012, 70 : 592–597.

Conference Proceedings

1. **V. Madhavi**, A. Vijaya Bhaskar Reddy, G. Madhavi, and N. Bakthavatchala Reddy published a paper on “Nanoencapsulation of pesticides: Sustainable perspective in agriculture” AIP Conference Proceedings 2280, 040029 (2020); <https://doi.org/10.1063/5.0018027>
2. **V. Madhavi**, T. Ramesh, N. Bhakthavatchala Reddy, and Grigory V. Zyryanov “Nanocomposite hydrogels for wastewater treatment” AIP Conference Proceedings 2390, 020043 (2022); <https://doi.org/10.1063/5.0069593>
3. T. Ramesh, **V. Madhavi**, P. Neelima, K. Nagendra Kumar, N. Bakthavatchala Reddy, and Grigory V. Zyryanov, Effect of sintering temperature on the magnetodielectric performance of nickel ferrite, AIP Conference Proceedings 2390, 020064 (2022); <https://doi.org/10.1063/5.0068977>
4. **Dr.V.Madhavi** "Exploring the Concept of Computational Thinking in STEM Education," *2021 World Engineering Education Forum/Global Engineering Deans Council (WEEF/GEDC)*, Madrid, Spain, 2021, pp. 375-380, doi: 10.1109/WEEF/GEDC53299.2021.9657230.

International Conference Presentations

1. **V.Madhavi** presented a paper entitled “Application of eggshell biochar for the adsorptive removal of Fluoride and Congo red dye in aqueous solution” in 2nd International conference on Novel Materials and Technologies for Energy and Environmental Applications (NMTEEA) held during 17-18 Feb 2024.

2. **V.Madhavi** presented a paper entitled “ Sustainable adsorption method for the removal of Malachite dye using CoriandumSativum seeds powder” in 3rd International Conference on Engineering and Advancement in Technology (ICEAT-2022) held on 8-9th July 2022 at Mallareddy Institute of Engineering and Technology.
3. **V.Madhavi** presented a paper entitled “Facile synthesis of Graphene oxide using acid-alkali pretreated rice husk extract for the enhanced adsorption of hexavalent chromium in aqueous solution” in 6th International Conference on Nanoscience and Nanotechnology (ICONN-2021) held during 1-3rd Feb 2021 at SRM Institute of Science and Technology.
4. **V.Madhavi** presented a paper entitled “Nanocomposite hydrogels for wastewater treatment” in “Modern Synthetic Methodologies for Creating Medicines and Functional Materials” (MOSM 2020) held during 16-20 November,2020 at Yekaterinburg, Russia.
5. **V.Madhavi** presented a paper entitled “Modelling of experimentalCr(VI) adsorption on Acid and Alkali pretreated Rice Husk-Graphene Oxide” in International Conference on Nanoelectronics, Nanophotonics, Nanomaterials, Nanobioscience and Nanotechnology(5NANO 2020) held during 23-24th July 2020 at Mangalam College of Engineering, Ettumanoor, Kottayam, Kerala,India.
6. **V.Madhavi**presented a paper entitled “In situ green synthesis of Reduced Graphene Oxide by *ZeaMays*(Corn) peel extract” in 9th Virtual Nanotechnology Poster Conference NANOPOSTER 2020 held during 20-26th April 2020 at Hungary,Budapest.
7. **V.Madhavi**presented a paper entitled "Nanoencapsulation of Pesticides: Sustainable Perspective in Agriculture" Modern Synthetic Methodologies for Creating Drugs and Functional Materials (MOSM2019): Proceedings of the III International Conference held during November 13 to 16, 2019 in Yekaterinburg, Russia.
8. **V.Madhavi** presented a paper entitled “Nanotechnology traces in controlled release fertilizers” in ICRACACE held during 11-13th July 2016 at JNTUH.
9. **Dr.V.Madhavi** presented a paper entitled “Abatement of Cr(VI) by eco-friendly application of nano-bioremediation” in ICEE held during 15-17th Dec. 2014 in JNTUH.
10. **Dr.V.Madhavi** presented a Paper entitled “Iron based nanomaterials : a versatile tool for environmental applications” during 20-22 December, 2012.
11. **Dr.V.Madhavi** presented a Paper entitled “Green technology for environmental sustainability” (ISEHT-2012) during 15-17 July 2012.

12. **Dr.V.Madhavi** presented a Paper “Emerging threats and challenges to biodiversity: Policy framework for sustainable management” during 2-4 March, 2012.
13. **Dr.V.Madhavi** presented a Paper entitled “Nanotechnology-nanomaterial effluents in the environmental matrices” (EEEE-2011) during 23-24 December 2011.
14. **Dr.V.Madhavi** presented a Paper entitled “Role of medicinal plants in control of pesticide pollution” (MPHP-2010) during 27-29 December 2010.

National Journals: NIL

National Conference Presentations

1. **Dr.V.Madhavi** presented a Paper entitled “A Comprehensive overview on integrating Microwave ignition technology in IC Engines” in National Conference (NAME-19) in SVIST, Madanapalli on 25th January 2019.
2. **Dr.V.Madhavi** presented a Paper in National Symposium in GITAM University, Hyderabad during 6-8 September, 2018
3. **Dr.V.Madhavi** presented a Paper entitled (CRTDCS-2013), 9-10 Mar. 2013
4. **Dr.V.Madhavi** presented a Paper entitled “Thermodynamics for Environmental process” (TCBEP-2012) during 10-12 Dec, 2012.
5. **Dr.V.Madhavi** presented a Paper entitled “Degradation of chlorpyrifos by stabilized Fe(0) nanoparticles: effect of catalyst on degradation, Seminar proceedings” (RTCS-2012), during 31 Mar. 2012.
6. **Dr.V.Madhavi** presented a Paper entitled “Carboxy methyl cellulose stabilized nano particles for rapid degradation of chlorpyrifos in solutions” (RRTSONPC-2012), 19-20 Mar. 2012.
7. **Dr.V.Madhavi** presented a Paper (CTDOS-2011) held on 9th December, 2011.
8. **Dr.V.Madhavi** presented a Paper entitled “Effect of temperature and pH on treatment of aqueous chlorpyrifos solutions by nano ZVI particles” (NFCR-2011) during 19 November 2011.
9. **Dr.V.Madhavi** presented a Paper entitled “ Remediation of Chromium contaminated sites: An overview of site remediation techniques” (NSCME-2011) on 31 oct 2011

10. **Dr.V.Madhavi** presented a Paper entitled “Synthesis and characterization of Fe₀-nanoparticles for the degradation of halogenated pesticides & organic compounds” (CGP-2011) during 24- 26 October 2011.
11. **Dr.V.Madhavi** presented in a national seminar entitled “ Environment-Public Participation” during 29-30 Aug 2011.
12. **Dr.V.Madhavi** presented a Paper entitled “Bio-catalytic technology for environmental sustainability”(SFSE-2011) during 29-30 March 2011.
13. **Dr.V.Madhavi** presented a Paper entitled “Determination of fluoride content in water samples by using biosensor electrode” in Emerging trends in Electrochemical studies during 25-26 March, 2011.

FDP's Attended / Conducted

1. **Dr.V.Madhavi** conducted an international One-Week Online FDP on “Innovations in High-Performance Materials for Sustainable Energy and Environmental Impacts” from 29 April-4th May 2024.
2. **Dr.V.Madhavi** participated in an FDP entitled “National level online workshop on Origin software” during 28th May 2022.
3. **Dr.V.Madhavi** participated in an FDP entitled “Possessing the Two wardrobes: Communication and Writing” during 25th to 31st May 2020.
4. **Dr.V.Madhavi** participated in a national workshop entitled “Importance of Medicinal Plants in Human Health Care” during 19-20 Mar 2011

Professional Memberships:

1. Member of (ISEIS) “International Society for Environmental Information Sciences”
2. Member of (ISCA) “Indian Science Congress Association”.

Certifications

- Certification on “Training and lecture sessions in theoretical and practical aspects of environmental sample analysis using the following different analytical instruments” at **Bhabha Atomic Research Center (BARC), Mumbai.** (Laboratories of Environmental Assessment Division and Analytical Chemistry Division)

- Certification on “Research Methods: An Engineering Approach” a course study offered by WitsX, an online learning in edX platform.

Any Other Achievements

1. **Dr. V. Madhavi's** Bibliography has been added to Asia-Pacific who's who, XVIth Edition(2017).
2. **Dr.V.Madhavi** awarded Young Woman in Science by Venus International Foundation-2017.
3. Reviewer for various journals.