Sandhya-Profile

Dr P.SANDHYA ., M.Sc., B.Ed., PGDCA., Ph.D.
Assitant Professor of Chemistry (Contract)
Sri Padmavati Mahila Visvavidyalayam
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Tirupati-517 501, A.P, INDIA.

Educational Qualifications

Ph.D (Chemistry)	: Tile of Thesis "**Metal and metal oxide nanocomposites for environmental and biological applications**"
M.Sc., (Chemistry)	**:**(60.0%), 2007-09, Sri Venkateswara University, Tirupati.
B.Ed.	:(70.0%), 2006-08, Physical Chemistry, Sri Rama B.Ed College, Sri Venkateswara University, Tirupati, India.
PGDCA	:(73.3%), 2002-2005, S.P.W Degree & P.G College, Andhra Pradesh Productivity Council, A.P.
B.Sc. (Zoology, Chemistry, Physics)	:(63.0%), 2002-2005, S.P.W Degree & P.G College, Tirupati, A.P., India.

Research interested

- Electro-analysis of drugs and pesticides, Biosensors, Preparation of modified electrodes.
- Nanomaterials for water purification
- Morphologically or dimensionally controlled preparation, characterization and application of novel nanomaterials.
- The investigation of surface chemistry of nanoparticles in situ fabricated, and their interaction with substrates.
- Design of GO or Carbon-based composite nanostructures and exploring their applications in heterogeneous catalysis, electrochemistry, energy conversion or nanoscale electronic devices.

Technical Skills

- Having knowledge on Analytical Techniques especially of electroanalytical techniques like, D.C, DPP, ASV and CV
- Good knowledge in UV-vis, Fluorescence spectroscopy.
- Good Knowledge in TGA and DTS
- Hands on experience in working with TLC, GC.
- Computer skills

Teaching Experience

- July 2010 to still to date, working as a Lecturer in Chemistry, Sri Padmavati Mahila University, Tirupati.
- June 2009 to June 2010, working as a Guest Lecturer in Chemistry, SV Arts & P.G College, Tirupati.
- June 2009 to June 2010, Working as a Lecturer in Chemistry, SDHR Degree &P.G College, Tirupati.

National/International Publications

1. **Preparation of NiO-graphene oxide nanosensor for adsorptive stripping voltammetric determination of dinoterbon in food samples**

Kasaram Roja, Puthalapattu Reddy Prasad, ***Punyasamudram Sandhya*** *and Neelam Yugandhar Sreedhar, J. Electrochem. Sci. Eng. 6(3)(2016) 253-263.*
ISSN : 1847-9286; IF: 0.8

2. **Differential pulse voltammetric determination of diminazene in urine and serum samples using polyaniline modified GCE**
   M.Seenu Naik, Puthalapattu Reddy Prasad, ***Punyasamudram Sandhya*** *and Neelam Yugandhar Sreedhar, IJASTEMS,* Volume.3, Issue.4, 2017.
   ISSN: 2454-356X
3. **Electrochemical behaviour and quantitative determination of clomifene in pharmaceutical formulations**
   C.Nageswara Reddy, ***P.Sandhya****, P.R.Prasad and N.Y.Sreedhar*
   Int J Pharma Res Health Sci. 2017, 5 (6), 1896-03
   ISSN: 2348-6465.
4. **Structural, morphological and 1/f noise properties of ITO/TiO2thin films by e-beam evaporation system for optoelectronic device applications**
   Manjunath, V., Sowmya, D.V., Achari, ***P. Sandhya****, K.M.M.,Ananda, P.,Krishnaiah, M.*
   AIP Conference Proceedings, 2020, 2280, 0018120
5. **A modified sensitive palladium-copper oxide and multiwalled carbon nanotubes electrochemical sensor for detection of ametridione pesticide**
   P.Reddy Prasad, V.Bebi, ***P.Sandhya****, P.Sudheer and N.Y.Sreedhar, J. Appl. & Nat. Sci. 13(3), 798 – 806, (2021),*
   ISSN: 2231-5209; I.F:0.8; https://doi.org/10.31018/jans.v13i3.2531
6. **Biosynthesis of α-Fe_2O_3-CdO Nanocomposites for Electrochemical Detection of Chloridazon Herbicide**
   Puthalapattu Aruna, Puthalapattu Reddy Prasad, ***Punyasamudram Sandhya****, Neelam Yugandhar Sreedhar, Biointerface Research in Applied Chemistry, 12,5, 2022, 5772-5784.*
   ISSN: 2069-5837.; Impact factor:1.52; 4 https://doi.org/10.33263/BRIAC125.57725784
7. **Electrochemical non-enzymatic strategy with green synthesized Fe_2O_3–CuO nanocomposite for detection of amiprofos-methyl herbicide in industrial effluents and soils**
   Reddy Prasad Puthalapattu, ***Sandhya Punyasamudram****, Ayyappa Bathinapatla, Nagendra Kumar Putta Venkata, Suvardhan Kanchi, Chemical Physics Impact, 6 (2023) 100195,*
   Impact factor: 2.2; ISSN:2667-0224; https://doi.org/10.1016/j.chphi.2023.100195, **(Q2)**
8. **Biosynthesis of $ZnFe_2O_4$@Ag Hybrid nanocomposites for degradation of 2,4-dichlorophenoxyacetic acid herbicide**
   Sandhya P*, Reddy Prasad P, Ayyappa B, Suvardhan K, Jyothi, P V Nagendra Kumar, Chemical Physics Impact, 100282, 2023*
   Impact factor: 2.2; ISSN:2667-0224; https://doi.org/10.1016/j.chphi.2023.100282, **(Q2)**
9. **Multifunctional characteristics of biosynthesized $CoFe_2O_4$@Ag nanocomposite by photocatalytic, antibacterial and cytotoxic applications**
   Sandhya P*, Reddy Prasad P, Ayyappa B, Ravikumar M, Suvardhan K, Putt Venkata N K, Chemosphere, 349 (2024) 140892.*
   ISSN No: 0045-6535; Impact Factor: 8.8
   https://doi.org/10.1016/j.chemosphere.2023.140892, (Q1)

10. **Biosynthesis of $CuFe_2O_4$@Ag hybrid nanocomposite: Ultrasensitive detection and catalytic reduction of 4-nitrophenol**
***Sandhya Punyasamudram**; Reddy Prasad Puthalapattu, Ayyappa Bathinapatla, Suvardhan Kanchi, Putta Venkata Nagendra Kumar*
Chemical Physics Impact 8 (2024) 100619
ISSN: 2667-0224; Impact factor: 2.6
https://doi.org/10.1016/j.chphi.2024.100619, (Q2)

11. **Eco-Friendly Phytochemical-Derived Co_3O_4@Ag Nanoparticles for Ethanol Oxidation and Antibacterial Activity**
*Supriya Gumma; Reddy Prasad Puthalapattu; **Sandhya Punyasamudram**; Phani Raja Kanuparthy; Nagendra Kumar Putta Venkata*
Asian journal of green chemistry, 8, 5, 2024, 560-578
ISSN: 2588-4328, Impact factor:1.0, https://doi.org/10.48309/ajgc.2024.456977.1504

12. **In Situ Synthesis of ZnCo2O4 and Pd@ZnCo2O4 Nanocomposites for Dye Degradation and Biological Applications**
*Supriya Gumma, Puthalapattu Reddy Prasad, **Sandhya Punyasamudram**, Adikay Sreedevi, Venkata Nagendra Kumar Putta, Phani Raja Kanuparthy*
J. Environ. Nanotechnol., 13, 3 (2024) pp. 41-51
https://doi.org/10.13074/jent.2024.09.242735 ISSN: 2279-0748

Conference Proceedings

1. Structural, Morphological and 1/f noise properties of ITO/TiO_2 thin films by e-beam evaporation system for optoelectronic device applications
MOSM 2019, Nov13 -15
2. Voltammetric detection of chlornitrofen in environmental samples by using ZrO2/GO modified glassy carbon electrode
P.Sandhya, C.Nageswara Reddy, P.V.Nagendra Kumar and N.Y.Sreedhar
Proceedings the book of NSETCMES-2019, 1-10, 2019

BOOKS

- "Monitoring of Toxic Trace Metals by Voltammetric Techniques", (2013) and bearing **ISBN 978-3-659-45940-5,** published by LAMBERT, Academic Publishing House., Germany.
- "Proceedings the book of national seminar on Emerging Trends in Chemical, material and environmental Sciences", 27th September, 2019, Roshan Publications, Vishakapatnam, A.P., India, ISBN NO: 978-93-87540-98-9

Conferences/Seminars/Workshops

1. **P.Sandhya**, Presented at RRTSONPC-08, National Seminar, at Sri Venkateswara University, Tirupati on Feb, 25-26th, 2008.
2. **P.Sandhya** "Adsorptive stripping voltammetric determination of monocrotphos in environmental samples using single walled carbon nanotubes modified glassy carbon electrode". National Seminar on role of chemistry in monitoring and management of environment (RCMME-09), SVU, Tirupati, Feb 16-17 (2009) p83.
3. **P.Sandhya**, presented paper on " 2nd AP Science Congress, Andhra Pradesh academy of sciences, Hyderabad and Sri Venkateswara University, Tirupati, November 14-16th, 2009.
4. **P.Sandhya,** International symposium on frontiers in pharmaceutical Research and nanotechnology (Nanopharma-2011), on 5th and 6th of March 2011, Organized by clnfocus research pvt ltd India & Sri Padmavathi school of pharmacy, Triuapti.
5. **P.Sandhya,** Participated workshop on instrumental methods in chemical analaysis, held at NBKR Science & Arts College, Vidhyanagar, 1st Feb 2011.

6. **P.Sandhya,** Presented paper in National seminar in recent trends in chemistry research - 2014, held on 3th July 2014, Govt. Degree College, Kouduru.
7. **P.Sandhya,** Presented paper on national seminar on "New trends in Polymer chemistry and characterization (NTPC-2015) held at S.B.V.R Degree College, Badvel , YSR Distrct on April 19th 2015.
8. **P.Sandhya** and N.Y.Sreedhar, "C-dots/ZnO nanocomposites for efficient photo and electro-catalytic application of 4-Nitrophenol" International Conference on Mathematical Sciences & Engineering Applications(ICMSEA-2016), BABA Institute of Technology & Sciences, 23rd-25th Dec-2016.
9. **P.Sandhya,** participated in Two day workshop on patenent information cell sponsed by A.P., State Council of Science and Technology, Hyd, on 30th 31st March 2016.
10. **P.Sandhya,** Poster presentation on National conference on emerging trends in pharmaceutical and chemical sences (ETPCS-2016) held during 28th & 29th March 2016, at Sri Venkateswara University, Tirupati
11. **P.Sandhya** and N.Y.Sreedhar, NiO-graphene oxide nanosensor for adsorptive stripping voltammetric determination of dinoterbon in environmental samples" Indian Science congress (ISCA), Jan 3rd to 7th, 2017, at Sri Venkateswara University, Tirupati, Andhra Pradesh, India.
12. **P.Sandhya,** Participated Virnichi programme-2017, held on Sri Padmavathi Engineering College, Sri Padmavathi Mahila University, Tirupati-517.
13. **P.Sandhya**, presented paper entitled "Preparation of Ag/NiO/RGO Electrochemical Nanosensor for Dinobuton Pesticide Determination in Various Environmental Samples, National conference on "Current trends in Chemical and pharmaceutical sciences (CTCPS-2017), Sri Venkateswara University, Tirupati, 1st, December, 2017.
14. **P.Sandhya**, presented paper entitled, CQDS fused on three dimensional flower model CuO Nancomposites for efficient photocatalytic activity (ISBN: (978-93-5291-377-0) International conference on advancements and challenges in chemical sciences (ICACCS 2018) 2nd & 3rd Feb 2018 at PG & Research Department of Chemistry, Pachaiyappa's College, Chennai, Tamil Nadu, India.
15. **P.Sandhya,** Participated international conference in Chemistry iConChem 2018, IISER, Tirupati during 24th May 2018 to 26th may 2018.
16. **P.Sandhya**, presented paper entitled "Electrochemical preparation of a novel type of C-dots/ZrO_2 nanocomposite for detection of organophosphorus pesticides **"**National seminar on Role of chemistry in Nano technology" S.V.Arts College, Tirupati 13-14th March 2019.
17. **P.Sandhya,** Presented paper entitled "Preparation of CuO-GQDs Nanosensor for Detection of Dicapthon Pesticide by Differential Pulse Voltammetry" National seminar on Emerging trends in chemical, material and environmental sciences-2019**, 27th sep 2019.** Govt. Degree College, Puttur., A.P., India
18. **P.Sandhya,** presented paper entitled "A differential pulse voltammetric sensor for detection of dinobuton pesticide in environmental samples using a Fe_2O_3-ZnO modified glassy carbon electrode" International conference on "Advances in Biosciences and Technology: Impact on Plant, Animal and Human Health" (ICABT-2019) held on Sri Venkateswara University, Tirupati during 24 to 26th Dec, 2019.
19. **P.Sandhya,** Presented a paper on "Green synthesis of metal/metal oxide nanoparticles and their environmental applications", Recent trends in science, engineering & Technology (RTSET-19) organised by Dept. of Humanities and Basic sciences, AITS, Tirupati, Date: 30 and 31st Oct 2019.

20. **P.Sandhya** Organising Member in Two national conference on Rencent advances in materials and molecules (NCRAMM19) organised by Physical sciences SPMVV, Tirupati. During 21st 22nd Feb 2019.

Research Ids

- **ORCID:** 0000-0003-0104-7428
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- **Vidwan:** 566765
- **Google Scholar:** tRBfJiMAAAAJ