

Biodata

Dr. Harpreet Kaur



Assistant Professor

Department of Chemistry,
Punjabi University, Patiala - 147002
Punjab.

Academic Qualification:

| Class | University/college | Year of passing |
|--|-------------------------------------|--------------------------|
| B.Sc. | Multani Mal Modi College Patiala | 1998 |
| M.Sc. (Chemistry) | Punjabi University, Patiala | 2000 |
| Ph.D. (Electrochemical synthesis of zinc compounds) | Punjabi University, Patiala | 2006 (degree awarded) |

Specialization:

Physical Chemistry

Area of research:

- ❖ Synthetic Electrochemistry
- ❖ Surface chemistry and nanosynthesis

Employment: (Lecturer)

- ❖ From 14/8/2003 to 10/3/2004 at Public College, Samana.
- ❖ From 17/8/2004 to 7/5/2005 at Public College, Samana.
- ❖ 3/8/2006 to 31/7/2011(adhoc) at Punjabi University, Patiala.
- ❖ 1/8/2011 to till date (regular) at Punjabi University, Patiala.

Teaching courses taught:

- ❖ Electrochemistry (M.Phil., M.Sc. –I)
- ❖ Thermodynamics (M.Sc. –I)
- ❖ Solid state chemistry (M.Phil.)
- ❖ X-ray Diffraction (M.Sc. –II)
- ❖ Surface chemistry (M.Sc. –II)
- ❖ Macromolecules/ polymers (M.Sc. –II)

Member:

- ❖ Life Member of Punjab Academy of Sciences.
- ❖ Life Member of **Indian journal of chemistry**

Research Supervision:

- ❖ No. of M.Phil. students guided: 10
- ❖ No. of Ph.D. students guided: 3
- ❖ No. of Ph.D. students under guidance: 2

Paper presented in Conferences: 35

- ❖ National: 28
- ❖ International: 7

Number of publications: 37

- ❖ Published: 37
- ❖ Communicated: 1

Reviewer of journals: Universal Journal of Chemistry

Carbohydrate Polymers (Elsevier)

Korean journal of Chemical engineering

And various other journals of Elsevier and springer

Reviewer of book, “The molecular nature of matter -8e, WILEY

Chaired Session during Conference: 12**Conference organized: 14 (as member/ convener)****Invited talks:**

- 1) **inspiring lecture (DST sponsored) at Shoolini university, Solan June 1, 2012.**

- 2) **inspiring lecture (DST sponsored) at IISF college of pharmacy at Moga 2015.**
- 3) **In international conference held at MG university, Kottayam, Kerla on 2019.**

❖ **Books Published as single author or as editor :**

| S. No. | Title with page nos. | Type of Book & Authorship | Publisher ISSN/ISBN No. |
|---------------|--|---|---|
| 1. | “Removal of dyes from effluent using bio-waste: Review” Lambert Academic Press 2017. Pages 1- 53 | Reference book and authors: Harpreet Kaur, Rajvir Kaur, Anita Thakur | ISBN: 978-620-2-05667-0 |
| 2. | Electrochemical oxidation of amidoblack 10B under amperostatic conditions with vertically oriented graphite/platinum electrodes https://doi.org/10.1007/978-981-15-9554-7_19 | Sustainable development through engineering innovations. Rajvir Kaur and Harpreet Kaur | Springer Nature Singapore Pte Ltd. 2021 |
| 3. | A review of past and future aspects of silica in drug delivery and sensing applications | Advances in diverse applications of polymer composites: Synthesis, application and characterization Harpreet Kaur and Gagandeep Kaur | Apple Academic Press (accepted) |

List of publications of Dr. Harpreet Kaur

1. J.S. Banait, Baljit Singh and Harpreet Kaur, Electrochemical reactions at Sacrificial Electrodes: Part XIII*. Synthesis of Coordination Compounds of Unique Mercury(II) glycolates: J. Electrochem. Soc. (India), 118, 52 (3), **2003**.
2. J.S. Banait, Baljit Singh and Harpreet Kaur, Electrochemical reactions at sacrificial electrodes: Part-XVI: Synthesis of zinc thiolates/dithiolates and their coordination compounds: J. Indian Chem. Soc., 555, 82, **2005**.
3. J.S. Banait, Baljit Singh and Harpreet Kaur, Electrochemical reactions at sacrificial electrodes: part-XVII: Synthesis of zinc(II) alkoxides: Indian J. Chem., 266, 46A, **2007**.

4. J.S. Banait, Baljit Singh and Harpreet Kaur, Electrochemical synthesis of zinc(II) phenoxides and their coordination compounds: Port. Electrochim. Acta., 435, 25, **2007**.
5. Harpreet Kaur and Seema Kapoor, Electrosynthesis of zinc(II) thiolates and their coordination compounds, J. Punjab Academy Sci.,40, 5-6, **2008-2009**.
6. J.S. Banait, Baljit Singh and Harpreet Kaur, Electrochemical reactions at sacrificial electrodes: Part-XVIII: Synthesis of coordination compounds of zinc(II) alkoxides: J. Indian Chem. Soc., 261, 87, **2010**.
7. J.S. Banait, Baljit Singh and Harpreet Kaur, Electrochemical synthesis of alkyl zinc halides and their coordination compounds Asian J. Chem., 1073, 3, **2010**.
8. J.S. Banait, Baljit Singh and Harpreet Kaur, Electrochemical synthesis of zinc(II) glycolates and their coordination compounds, J. Indian Chem. Soc., 641, 88, **2011**.
9. Harpreet Kaur and Amandeep Kaur, Direct electrochemical synthesis of coordination compounds of copper(II) halides: Part –I, **J. Indian Chem. Soc.**, 685, 90, **2013**.
10. Rishu Katwal, Harpreet Kaur and Brij Kishore Kapur, Application of copper-schiff's base complexes: A Review, **Sci. Revs. & Chem. Commun.**, 1, 3(1), **2013**.
11. Harpreet Kaur and Amandeep Kaur, Direct electrochemical synthesis and characterization of coordination compounds of copper(II) chlorides: Part –II, **Chem. Sci. Trans.**, 1013, 3(3), **2014**.
12. Rishu Katwal, Harpreet Kaur and Brij Kishore Kapur, The influence of solvents on morphology and size of electrochemically synthesized copper oxide nanostructure, **International Journal of Pharmaceutical Research Scholar (IJPRS)**, 274, 3(1-2), **2014**.
13. Harpreet Kaur and Rajvir Kaur, Removal of rhodamine-B dye from aqueous solution onto pigeon dropping: adsorption, kinetic, equilibrium and thermodynamic studies, **J. Mater. Environ. Sci.** 1830, 5(6), **2014**.
14. Harpreet Kaur and Anita Thakur, Adsorption of congo red dye from aqueous solution onto ash of Cassia fistula seeds: kinetic and thermodynamic studies, **Chem. Sci. Rev. and lett.** 159, 3(IIS), **2014**.

15. Harpreet Kaur, Swati and Rajvir Kaur, Kinetic and isotherm studies of congo red adsorption from aqueous solution by biowaste material, **Chem. Sci. Trans.**, 1300, 3(4), **2014**.
16. Harpreet Kaur, Rishu Katwal and et al, Electrochemical synthesized copper oxide nanoparticles for enhanced photocatalytic and antimicrobial activity, **J. Indus. Engg. Chem. (Elsevier)**, **173, 31, 2015**.
17. Harpreet Kaur and Poonam Thakur, A Review on electrochemical synthesis, **World J. Pharmacol. and Tech.**, 37, 3(3), **2015**
18. Anita Thakur, and Harpreet Kaur, Paper Industry Waste Sludge: A Low-Cost Adsorbent for Removal of Malachite green Dye, **Asian J. Chem.**, **2139**, 28(10), **2016**.
19. Deepak Pathania, Rishu Katwal and Harpreet Kaur, Enhanced photocatalytic activity of electrochemically synthesized aluminium oxide nanoparticles, *Int. J. Min. Metall. Mat.*, 358, 23(3), **2016**.
20. Amritpal Kaur, Rajvir Kaur and Harpreet Kaur, Electrochemical degradation of rhodamine-B dye, **Mor. J. Chem.**, 93,4(1), **2016**.
21. Rajvir Kaur and Harpreet Kaur, Electrochemical degradation of Congo red from aqueous solution: Role of graphite anode as electrode material, **Port. Electrochim. Acta.**, 185, 34 (3) **2016**.
22. Anita Thakur, and Harpreet Kaur, Removal of hazardous Rhodamine B dye by using chemically activated low cost adsorbent: Pine cone charcoal, **Int. J. Chem. Phy. Sci.**, 17-27,5(4), **2016**.
23. Rajvir Kaur and Harpreet Kaur, “ Calotropis Procera an effective adsorbent for removal of congo red dye : Isotherm and kinetics modeling, **Modeling earth System and Env. (Springer)** 1-13, **3:9, 2017. Doi:10.1007/s40808-017-0274-3**
24. Anita Thakur, and Harpreet Kaur, Response surface optimization of Rhodamine B dye removal by using paper industry waste as adsorbent, “**Int. J. Indus. Chem.**” (Springer), **2017. Doi 10.1007/s40090-017-0113-4.**

25. Rajvir Kaur and Harpreet Kaur, “ Adsorption of Amido Black 10B from aqueous solution using weed waste as adsorbent: Characterization, equilibrium, kinetic and thermodynamic studies, “**Asian J. Chem.**, 441-446, 29(2), 2017. **Doi: 10.14233/ajchem.2017.20242**
26. Rajvir Kaur and Harpreet Kaur, “ Role of electrode material in electrochemical oxidation of Malachite Green dye, **Mor. J. Chem.**, 16-24, 5(1), 2017.
27. Rishu Katwal, Rajvir Kaur and Harpreet Kaur, “Photo degradation of Congo Red, Methylene Blue and Methyl Red dyes using electrochemically synthesized Al₂O₃ nanocatalyst, **Asian J. Chem.**, 1095-1097, 29(5), 2017. **Doi: 10.14233/ajchem.2017.20428.**
28. Rajvir Kaur and Harpreet Kaur, “Calotropis Procera as effective adsorbent for removal of Malachite Green dye: A comprehensive study”., **Desalin. Water Treat.** 253-262, 78 2017. **Doi: 10.5004/dwe.2017.20548.**
29. Harpreet Kaur and Simranjit Kaur, “Photocatalytic studies of electrochemically synthesized polysaccharide functionalized ZnO nanoparticles” *Applied Nanoscience* 729-738, 8, 2018., **Doi: 10.1007/s13204-018-0815-8**
30. Biosynthesis, characterization and enhanced photocatalytic and antibacterial activity of *Paspalidium flavidum* mediated ZnO nanoparticles”, **Desalin. Water Treat.** 300-308, 123 2018. **Doi: 10.5004/dwt.2018.22787.**
31. Adsorptive removal of Amido Black 10b from aqueous solution using stem carbon of *Ricinus Communis* as Adsorbent”, **Asian J. Chem.**, 1071-1076, 31(5), 2019. **Doi: 10.14233/ajchem.2019.21813.**
32. Harpreet Kaur and Gagandeep Kaur, “Review on nanomaterials/conducting polymer based nanocomposited for the development of biosensors and electrochemical sensors,” **Polymer-Plastics technology and materials**, 2020. **DOI: <http://doi.org/10.1080/25740881.2020.1844233>.**
33. Harpreet Kaur and Gagandeep Kaur, “Spectroscopic and quantum chemical computational studies of silica nanocrystals extracted from rice straw,” **Silicon (Online published) 2021. Springer** **Doi: <http://doi.org/10.1007/s12633-021-01450-4>**

34. Harpreet Kaur and Gagandeep Kaur, "Eucalyptus modulated biosynthesis of nickel oxide nanoparticles with enhanced antibacterial and photo-catalytic activities," **Inorganic and Nano-metal Chemistry (Online published) 2022. Taylor & Francis. Doi: <http://doi.org/10.1080/24701556.2021.2025090>**
35. Harpreet Kaur, Deepika, et al., A novel method for synthesis of MOF-199 for sensing and photocatalytic applications. **Journal of Fluorescence, 2022.. Doi: <https://doi.org/10.1007/s10895-022-02902-9>**
36. Harpreet Kaur, Deepika , et al., Novel electrochemical synthesis and characterization of Zn(II) metal organic framework for photocatalytic and sensing applications" **Journal of Fluorescence, 2022. Doi: <https://doi.org/10.1007/s10895-022-02957-8s>**
37. Harpreet Kaur and Gagandeep Kaur, Electrochemical sensor based on ion-selective membrane of silica/polyaniline nano-composites for selective determination of uranyl ions" *Talanta Open*, 6, 2022. Elsevier Doi: <https://doi.org/10.1016/j.talo.2022.100158>

List of conferences attended/paper presented

1. Chemistry at Interfaces Trends – perspectives, held at SLIET Longowal, on 19-20 Dec. **2003.**
2. Sixth Punjab Science Congress, held at SLIET Longowal, on 7-9 Feb. **2003.**
3. UGC-SAP National Seminar on Recent Trends in Synthetic and Polymer Chemistry, held at H. P. University, Simla on 5-6 Dec. **2005.**
4. MatCon 2007 International Conference on Materials for the Millennium, held at Cochin on 1-3 Mar. **2007** (paper accepted for oral presentation but was not attended).
5. UGC-SAP National Seminar on Recent Trends in Synthetic and Polymer Chemistry, held at H. P. University, Simla on 23-24 Mar. **2007.**
6. National Symposium on Green Chemistry in Sciences and Engineering, held at SLIET Longowal, on 29-30 Mar. **2007.**
7. 11th Punjab Science Congress, held at Thaper University Patiala, on 7-9 Feb. **2008.**
8. National Seminar on Recent trends in Chemistry, held at Punjabi University, Patiala, on 21-22 Jan. **2009.**

9. National Symposium on Emerging trends in Chemistry, held at Punjabi University, Patiala, on 15-16 Feb. **2010**.
10. 13th Punjab Science Congress, held at Punjab University, Chandigarh, on 7-9 Feb. **2010**.
11. Frontiers of Fundamental and Industrial Electrochemistry: A Challenge of Science for a Better World to be held at University of Delhi, Delhi on 30-31 August 2010.
12. National Symposium on Recent advances in Chemistry and their impact on Environment, held at Punjabi University, Patiala, on 15-16 Feb. **2011**.
13. 1st Punjabi University science congress & national science day celebrations, held at Punjabi University, Patiala, on 28 Feb. **2011**.
14. International Conference on Innovation in Chemistry for sustainable development, held at Panjab University, Chandigarh, on 3-5 Dec. **2011**.
15. 2nd Punjabi University science congress & national science day celebrations, held at Punjabi University, Patiala, on Feb. **2012**.
16. National Seminar on Chemistry: An Interdisciplinary Science, held at Punjabi University, Patiala, on 15-16 Feb. **2012**.
17. National Seminar on, "New Frontiers in Chemistry", held at Punjabi University, Patiala, on 15-16 Feb. **2013**.
18. 6th National Seminar on, "New Paradigm in Chemical Sciences-2014", held at Punjabi University, Patiala, on 13 Feb. **2014**.
19. International Conference on "Emerging Areas of Mathematics for Science & Technology", held at Punjabi University, Patiala, on 30 Jan. - 1 Feb. **2015**.
20. 7th National Seminar on, "Synergistic Aspects of Chemical and Other Sciences-2015" held at Punjabi University, Patiala, on 19-20 Feb. **2015**.
21. Professor Ram Chand Paul, "National Symposium on Innovations in Chemical Sciences" held at Panjab University, Chandigarh, on 20-21 March 2015.
22. 8th National Seminar on, "New Paradigm in chemical sciences: synthetic and analytical prospective, held at Punjabi University, Patiala, on 4-5 Feb. **2016**.
23. 3rd international conference on sustainable development through green initiatives, held at Sri Guru Granth Sahib World University Fatehgarh sahib, on 1-2 March 2016.

24. 9th National Seminar on, “New Paradigm in chemical sciences: synthetic and analytical prospective, held at Punjabi University, Patiala, on 4-10 Feb. **2017**.
25. Professor R. C. Paul, “National Symposium on current advances in Chemical Sciences” held at Panjab University, Chandigarh, on 24-25 Feb. 2017.
26. “21st Punjab Science Congress”, held at Punjab Agriculture University, Ludhiana, on 7-9 Feb. 2018.
27. “National conference on “Chemical and environmental Sciences: Innovations and Advances”, held at Punjabi University, Patiala, on 15-16, Feb. 2018
28. “National conference on research in chemical sciences: current scenario”, held at Sri Guru Granth Sahib world University, Fatehgarh Sahib, 29, Mar. 2019.
29. “11th National Seminar on, “Recent trends in chemical and environmental sciences-2019”, held at Punjabi University, Patiala, on 7-8, Feb. 2019
30. “12th national conference on chemical and environmental sciences: advanced innovations 2020”, held at Punjabi University, Patiala, on 19 -20, Feb. 2020.
31. “3rd International conference on advanced materials”, held at M.G.University, Kottayam, Kerala, on 9-11 Aug. 2019.
32. International webinar on “Sustainable chemistry (IWSC-2021)” held (Online) Association of chemistry teachers and Homi Baba centre for science education (TIFR), Mumbai, on 18 March 2021.
33. Two days national conference on, “Strategies and solutions to achieve clean air,” Punjabi University Environment Society in collaboration with Punjab Pollution control Board , held at Punjabi University , Patiala on 24 – 25 Dec. **2021**
34. 25th Punjab Science Congress, “Future endeavours of science & technology for sustainable growth” held at (Online) Sri Guru Teg Bahadur Khalsa college, Sri Anandpur Sahib, Rupnagar, on 7 -9 Feb. **2022**.
35. 13th in series and Ist International conference on recent advances in Chemistry-2023 held at Punjabi University, Patiala on 23 – 24 Feb. 2023

