Dr. Sandeep Kaushal

Ph. D, M. Sc., UGC-NET
Assistant Professor
Department of Chemistry
Sri Guru Granth Sahib World University
Fatehgarh Sahib, Punjab, India
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Areas of Specialization: Synthesis of inorganic/ hybrid ion-exchange nanocomposites, electrochemical studies, sensors for heavy metal ions detection.

Ph. D. Thesis Title: "Synthesis, Characterization and Applications of Zirconium Based Inorganic Ion Exchangers"

ACADEMIC QUALIFICATIONS:

Degree	Institution	Year	Percentage/ Division
Ph. D. Chemistry	Punjab Technical University, Jalandhar	2016	1st (Course work)
M. Sc. Chemistry	Dr. Bhim Rao Ambedkar University, Agra	2007	1st
B. Ed.	Jammu University, Jammu	2005	1st
B. Sc. (Non-Medical)	Himachal Pradesh University, Shimla	2004	2nd
XII	Himachal Pradesh Board of School Education, Dharamshala	2000	1st
UGC/CSIR National Eligibility Test for Assistant Professor	NET (UGC-CSIR)	2012	
CTET	C.B.S.E. New Delhi	2013	
HPTET	Himachal Pradesh Subordinate Service Selection Commission, Hamirpur	2012	

TEACHING INTEREST:

Chemistry (General course for UG students of Engg.), Physical Chemistry (UG students of chemistry), Inorganic Chemistry & Group Theory (PG students of chemistry), Analytical Chemistry, Instrumental methods of analysis – Graduate students of Chemistry.

TEACHING EXPERIENCE:

Name of the Institution	Position	From	To	Subject/Courses taught
Sri Guru Granth Sahib World University, Fatehgarh Sahib	Assistant Professor	July, 2016	Till date	Inorganic Chemistry, Group Theory, Advance Inorganic Chemistry, General Chemistry (UG Physics) Chemistry Laboratory courses
Sri Guru Granth Sahib World University, Fatehgarh Sahib	Assistant Professor	July, 2015	May, 2016	Group Theory, Industrial Chemistry, Analytical Chemistry, General Chemistry (UG Physics) Chemistry Laboratory courses
Sri Guru Granth Sahib World University, Fatehgarh Sahib	Assistant Professor	July, 2014	May, 2015	Inorganic Chemistry, Industrial Chemistry, Analytical Chemistry, General Chemistry (UG Physics) Chemistry Laboratory courses
RIMT-IET, Mandigobindgarh	Assistant Professor	August, 2008	April, 2014	Engineering Chemistry, Environmental Chemistry, Chemistry Laboratory course
Doaba Polytechnic College, Raipur	Lecturer	January, 2008	August, 2008	Engineering Chemistry, Chemistry Laboratory course

Patent under consideration:

Sandeep Kaushal, Rahul Badru, Pushpender K. Sharma and Pritpal Singh, entitled Synthesis of Novel Nano Composite and its use as an exchanger towards removal of Humic Acid and Other Polyphenolic Compounds from soil DNA.

Publications in peer reviewed journals

Publications in 2017:

1. **Sandeep Kaushal,** Mandeep Kaur, Susheel Mittal, Pritpal Singh, Fabrication of Cr (III) Ion Selective Electrode Based on Zinc Oxide-Tin (IV) Antimonyphosphate nanocomposite and Its Analytical Application (**2017, Accepted: Asian Journal of Chemistry**)
2. **Sandeep Kaushal**, Rahul Badru, Pritpal Singh, Sanjeev Kumar and Susheel Kumar Mittal, Estimation of Trace Level Cadmium (II) by Polyaniline-zirconium phosphoborate nanocomposite based membrane electrode (**2017, Accepted: Journal of Analytical Chemistry**)
3. **Sandeep Kaushal**, Tejwant Singh Kang and Pritpal Singh, Synthesis and characterization of a tin(IV) antimonophosphate nano-composite membrane incorporating 1-dodecyl-3-methylimidazolium bromide ionic, **RSC Advances**, **2017**, 7, 12561-12569.
4. **Sandeep Kaushal**, Susheel Mittal and Pritpal Singh, zirconium phosphoborate based ion selective membrane electrode for potentiometric determination of Ba(II) ions, **Asian Journal of Chemistry**, 29(2), **2017**, 375-380.

Publications in 2016:

5. **Sandeep Kaushal**, Rahul Badru, Sanjeev Kumar, Susheel Kumar Mittal, Pushpender Kumar Sharma and Pritpal Singh, Electrochemical characterization of Polyaniline-Zirconium phosphoborate nanocomposite and its application in dye removal**, RSC Advances,** 6, **2016**, pp. 111606–111615.
6. **Sandeep Kaushal**, Rahul Badru, Pritpal Singh, Sanjeev Kumar and Susheel Kumar Mittal, Nanocomposite Zirconium phosphoborate incorporated with carbon nano tubes Ion-exchanger with Photocatalytic Activity, **Separation Science and Technology, 2016**, 51(18)pp. 2896–2902.

7. **Sandeep Kaushal**, Rahul Badru, Sanjeev Kumar, Susheel Kumar Mittal and Pritpal Singh, Fabrication of a Mercury (II) Ion Selective Electrode based on poly-o-Toluidine-Zirconium Phosphoborate, **RSC Advances**, 6, **2016**, pp 3150-3158.

Publications in 2014-15:

8. **Sandeep Kaushal**, Pushpender K. Sharma, Susheel K. Mittal and Pritpal Singh, A Novel Zinc Oxide-Zirconium (IV) Phosphate Nanocomposite as Anti-bacterial Material with Enhanced Ion Exchange Properties, **Colloids and Interface Science Communications**, 7, **2015**, pp 1-6.
9. **Sandeep Kaushal**, Pritpal Singh and Susheel Kumar Mittal, Study of effect of Temperature on the Properties and Structure of Zirconium Phosphoborate Ion Exchanger**, International Journal of Advanced Technology in Engineering and Science,** 02 (12), **2014**, pp 663-669.
10. **Sandeep Kaushal**, Pritpal Singh and Susheel Kumar Mittal, Yttrium (III) Selective Electrode based on Zirconium (IV) Phosphoborate, **Journal of New Materials for Electrochemical Systems**, 17, **2014**, pp 5-8.
11. **Sandeep Kaushal**, Pritpal Singh and Susheel Kumar Mittal, Electrochemical studies on zirconium phosphoborate based heterogeneous membranes, **Journal of Electrochemical Science & Engineering**, 4 (1), **2014**, pp 55-65.

Publications under process:

12. **Sandeep Kaushal**, Rahul Badru, Sanjeev Kumar, Susheel Kumar Mittal, Pritpal Singh, TiO_2 doped Tin Antimonophosphate Nanocomposite as Photocatalyst Material with Enhanced Ion Exchange Properties (communicated).
13. **Sandeep Kaushal**, Rahul Badru, Sanjeev Kumar, Susheel Kumar Mittal, Pritpal Singh, Adsorption isotherms and kinetics of dyes onto polyaniline doped zirconium phosphoborate nanocomposite (Communicated).

CONFERENCE AND WORKSHOP ATTENDED:

- Sandeep Kaushal and Pritpal Singh, Tin (IV) antimonophosphate and 1-dodecyl-3-methylimidazolium bromide ionic liquid based nanocomposite membrane – Synthesis and Electrochemical Characterization," Vth National Symposium on Advances in Chemical Sciences on 7-8th March 2017.
- Presented paper (**Oral**) in 20th Punjab Science Congress Synthesis held at IET Bhaddal, Punjab, entitled "Characterization and Applications of Polyaniline-Zirconium Phosphoborate Nanocomposite Ion Exchanger," on 7th February, 2017.
- Presented paper (**Oral**) in 104th Indian Science Congress Association held at SVU, Tirupati, entitled "Cadmium (II) selective electrode based on Polyaniline-zirconium phosphoborate nanocomposite," on 3-7 January, 2017.
- Sandeep Kaushal and Pritpal Singh, "Electrochemical Studies on Zinc Oxide-Zirconium (IV) Phosphate Nanocomposite Ion Exchange Membrane", Synergistic Aspects of Chemical and Other Sciences, Punjabi University, Patiala, Feb, 19-20, 2015.
- Sandeep Kaushal and Pritpal Singh, "Poly-o-toluidine Zirconium Phosphoborate Nanocomposite Based Ion Selective Electrode For Potentiometric Determination of Hg(II) Ions With Antibiotic and Photocatalytical Activity", New Paradigm in Chemical Sciences: Synthetic and Analytical Perspective, Punjabi University, Patiala, Feb, 04-05, 2016.
- Sandeep Kaushal and Pritpal Singh, "Synthesis and Applications of Polyaniline Zirconium Phosphoborate Nanocomposite as Cd(II) Selective Electrode, Antibacterial agent and Photocatalyst", New Paradigm in Chemical Sciences: Synthetic and Analytical Perspective, Punjabi University, Patiala, Feb, 04-05, 2016.
- Sandeep Kaushal and Pritpal Singh, "Preparation and Characterization of Carbon Nano Tubes Incorporated Nanocomposite Ion Exchanger" Recent Advances in Chemical Biological and Environmental Sciences, M.M. Modi College, Patiala, January, 30-31, 2015.
- National Conference on Preservation of Environment: Challenges before Humanity" held at Sri Guru Granth Sahib World University, Fatehgarh Sahib on 14th March, 2013**.**
- Unfolding in Vedic Mathematics: Significance and Applications in Modern Science, Organized by Punjab Technical University, April, 28, 2011.

- 98th Indian Science Congress Association held at SRM University, Chennai on 3-7th January, 2011.
- Faculty Development Programme, Sponsored by Department of Science & Technology, Govt. of India, New Delhi in Association with Entrepreneurship Development Institute of India, Ahmadabad, held in RIMT-IET, Madigobindgarh, December 17-23, 2009.

Others

- Having knowledge of interpretation of Field emission scanning electron microscopy, Energy dispersive X-ray spectrometry, Transmission electron microscopy, Thermo-gravimetric–Differential Scanning Calorimetry, Powder X-ray diffraction, Fourier transform-infrared spectroscopy,
- Knowledge of Origin, High Xpert Score etc**.**

Member of Professional bodies:

Member of Indian Science Congress Association, Kolkata.

PERSONAL DETAILS

Citizenship	**:**	Indian
Gender	:	Male
Marital Status	**:**	Married
Father's Name	**:**	Sh. Jagdish Chand
Mother's Name	**:**	Mrs. Keshari Devi
Languages	**:**	English, Hindi, Punjabi