

Department of Chemistry

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Research Publications

Research Papers Published in Peer Reviewed Journals:

1. Kaushal, S.; Kaur, H.; Kumar, S.; Badru, R.; Mittal, S.; Singh, S. Novel Horizon: Smart TiO₂/Sn(IV)SbP Nanocomposite with Enhanced Electrochemical and Photocatalytic Properties, *Russ. J. Inorg. Chem.* **2020**, 65(4), 616–625.
2. Parul; Kaur, K.; Badru, R.; Singh, P.; Kaushal, S. Photodegradation of organic pollutants using heterojunctions: a review, *J. Environ. Chem. Eng.* **2020**, 8, 103666-103685.
3. Kumari, V.; Badru, R.; Singh, P.; Kaushal, S. Synthesis and Electrochemical behaviour of GO doped ZrP based membranes, *J. Environ. Chem. Eng.* **2020**, 8, 103690-103698.
4. Kaur, R.; Kaushal, S.; Singh, P. Selective removal of lead (II) ions and estimation of Ca (II) ions using poly- o- toluidine–zirconium (IV) molybdophosphate, *Chem Pap.* **2019**, 73(8), 2027–2039.
5. Kaushal, S.; Badru, R.; Singh, P.; Kumar, S.; Mittal, S.K. Estimation of Trace Level Cadmium(II) by Polyaniline-Zirconium Phosphoborate Nanocomposite-based Membrane Electrode, *J. Anal. Chem.* **2019**, 74, 800-808.
6. Kaur, R.; Kaushal, S.; Singh, P. Efficient removal of Hg (II) ions from waste water by a new nano-composite poly-o-toluidine tin-zirconium (IV) molybdophosphate *Int. J. Environ. An. Ch.* doi.org/10.1080/03067319.2019.1659253.
7. Kaushal, S.; Badru, R.; Kumar, S.; Kaur, H.; Singh, P. Efficient Removal of Cationic and Anionic Dyes from Their Binary Mixtures by Organic–Inorganic Hybrid Material, *J. Inorg. Organomet. Polym. Mater.* **2018**, 28(3), 968.
8. Kaushal, S.; Boparai, J.K.; Kaur, R.; Singh, G.; Kang, T.S.; Badru, R.; Singh, P.; Sharma, P.K. Purification of Metagenomic DNA using Novel Nanocomposite Titanium Dioxide-polyaniline Tin (IV) antimonophosphate, Insights into the Mechanism Underlying Purification Process, *Curr. Biotechnol.* **2018**, 7, 1.
9. Singh, M.; Kaushal, S.; Singh, P.; Sharma, J. Boron doped graphene oxide with enhanced photocatalytic activity for organic pollutants, *J. Photochem. Photobiol.* **2018**, 364, 130.

10. Kaushal, S.; Mittal, S.; Singh, P. Developments in Synthesis, Characterization and Applications of Composite Ion-exchange Materials: A Review, *Orient. J. Chem.* **2017**, 33(4), 1726.
11. Kaushal, S.; Kaur, M.; Mittal, S.K.; Singh, P. Determination of Cr(III) in industrial effluents by ZnO-SnSbP nanocomposite, *Asian J. Chem.* **2017**, 29(7), 1595.
12. Kaushal, S.; Kang, Singh, G.; Kang, T.S.; Singh, P. Synthesis and characterization of a tin(IV) antimonophosphate nano-composite membrane incorporating 1-dodecyl-3-methylimidazolium bromide ionic liquid, *RSC Advances*. **2017**, 7, 12561.
13. Kaushal, S.; Mittal, S.K.; Singh, P. Barium selective electrode based on Zirconium phosphoborate ion exchanger, *Asian J. Chem.* **2017**, 29(2), 375.
14. Kaushal, S.; Badru, R.; Kumar, S.; Mittal, S.K.; Sharma, P.K.; Singh, P. Electrochemical behavior of a membrane based on zirconium(IV) phosphoborate nanocomposite and its application in dye removal, *RSC Advances*. **2016**, 6, 111606.
15. Kaushal, S.; Badru, R.; Singh, P.; Kumar, S.; Mittal, S.K. Nanocomposite zirconium phosphoborate ion exchanger incorporating carbon nanotubes with photocatalytic activity, *Sep. Sci. Technol.* **2016**, 51(18), 2896.
16. Kaushal, S.; Badru, R.; Kumar, S.; Mittal, S.K.; Singh, P. Fabrication of a mercury(II) ion selective electrode based on poly-o-toluidine-zirconium phosphoborate, *RSC Advances*. **2016**, 6, 3150.
17. Kaushal, S.; Sharma, P.K.; Mittal, S. K.; Singh, P. A novel zinc oxide-zirconium (IV) phosphate nanocomposite as antibacterial material with enhanced ion exchange properties, *J. Colloid. Interf. Sci. Comm.* **2015**, 7, 1.
18. Kaushal, S.; Mittal, S. K.; Singh, P. Yttrium (III) Selective Electrode Based On Zirconium (IV) Phosphoborate, *J. New Mat. Electr. Sys.* **2014**, 17, 5.
19. Kaushal, S.; Mittal, S. K.; Singh, P. Electrochemical studies on zirconium phosphoborate based heterogeneous membranes, *J. Electrochem. Sci. Eng.* **2014**, 4 (1), 55.
20. Kaushal, S.; Mittal, S. K.; Singh, P. Study of Effect of Temperature On the Properties And Structure Of Zirconium Phosphoborate Ion-Exchanger, *Int. J. Adv. Tech. Eng. Sci.* **2014**, 2 (12), 663-69.