

List of publications

1. **Vijay Kumar**, Devendra Kumar Singh, Sweta Mohan, Ravi Kumar Gundampati, Syed Hadi Hasan, Photoinduced green synthesis of silver nanoparticles using aqueous extract of *Physalis angulata* and its antibacterial and antioxidant activity, *Journal of Environmental Chemical Engineering*, 2017, 5, 744–756.
2. **Vijay Kumar**, Rajeev Kumar Gupta, Ravi Kumar Gundampati, Manisha Malviya, Syed Hadi Hasan, 2017, Biosynthesis of silver nanoparticles from the novel strain of *Streptomyces* Sp. BHUMBU-80 with highly efficient electroanalytical detection of hydrogen peroxide and antibacterial activity (Just Accepted),
3. **Vijay Kumar**, Devendra Kumar Singh, Sweta Mohan, Daraksha Bano, Ravi Kumar Gundampati, Syed Hadi Hasan, Green synthesis of silver nanoparticle for the selective and sensitive colorimetric detection of mercury (II) ion. *Journal of Photochemistry and Photobiology*, 2017, 168, 67-77.
4. **Vijay Kumar**, Sweta Mohan, Devendra Kumar Singh, Devendra Kumar Verma, Vikas Kumar Singh, Syed Hadi Hasan, Photo-mediated optimized synthesis of silver nanoparticles for the selective detection of Iron(III), antibacterial and antioxidant activity. *Materials Science and Engineering: C*, 2017, 71, 1004-1019.
5. **Vijay Kumar**, Devendra Kumar Singh, Sweta Mohan, Syed Hadi Hasan, Photo-induced biosynthesis of silver nanoparticles using aqueous extract of *Erigeron bonariensis* and its catalytic activity against Acridine Orange, *Journal of Photochemistry and Photobiology B: Biology*, 2016, 155, 39-50.
6. **Vijay Kumar**, Ravi Kumar Gundampati, Devendra Kumar Singh, Medicherla V. Jagannadham, Shyam Sundar, Syed Hadi Hasan, Photo-induced rapid biosynthesis of silver nanoparticle using aqueous extract of *Xanthium strumarium* and its antibacterial and antileishmanial activity, *Journal of Industrial and Engineering Chemistry*, 2016,37, 224-236.
7. **Vijay Kumar**, Ravi Kumar Gundampati, Devendra Kumar Singh, Daraksha Bano, Medicherla V. Jagannadham, Syed Hadi Hasan, Photoinduced green synthesis of silver nanoparticles with highly effective antibacterial and hydrogen peroxide sensing properties, *Journal of Photochemistry and Photobiology B: Biology*, 2016,162, 374-385
8. **Vijay Kumar**, Daraksha Bano, Sweta Mohan, Devendra Kumar Singh, Syed Hadi Hasan, Sunlight-induced green synthesis of silver nanoparticles using aqueous leaf extract of *Polyalthia longifolia* and its antioxidant activity, *Materials Letters*, 2016, 181, 371-377.

9. Devendra Kumar Singh, Sweta Mohan, **Vijay Kumar**, Syed Hadi Hasan, Kinetic, isotherm and thermodynamic studies of adsorption behaviour of CNT/CuO nanocomposite for the removal of As(III) and As(V) from water, *RSC Advances*, 2016, 6, 1218-1230.
10. Devendra Kumar Singh, **Vijay Kumar**, Vikas Singh, Syed Hadi Hasan, Modeling of Adsorption Behavior of the Amine-Rich GOPEI Aerogel for the Removal of As (III) and As (V) from Aqueous Medium, *RSC Advances*, 2016, 6, 56684-56697.
11. Devendra Kumar Singh, **Vijay Kumar**, Sweta Mohan, and Syed Hadi Hasan, Polylysine functionalized graphene aerogel for the enhanced removal of Cr(VI) through adsorption: kinetic, isotherm, and thermodynamic modeling of the process. *Journal of Chemical and Engineering Data*, 2017, 62(5), 1732-1742.
12. Devendra Kumar Singh, **Vijay Kumar**, Sweta Mohan, Daraksha Bano, Syed Hadi Hasan, Breakthrough curve modeling of graphene oxide aerogel packed fixed bed column for the removal of Cr(VI) from water. *Journal of Water Process Engineering*, (Accepted).
13. Sweta Mohan, **Vijay Kumar**, Devendra Kumar Singh and Syed Hadi Hasan, Synthesis and characterization of rGO/ZrO₂ nanocomposite for enhanced removal of fluoride from water: kinetics, isotherm, and thermodynamic modeling and its adsorption mechanism. *RSC Advances*, 2016, 6, 87523-87538.
14. Sweta Mohan, Devendra Kumar Singh, **Vijay Kumar**, Syed Hadi Hasan, Effective removal of Fluoride ions by rGO/ZrO nanocomposite from aqueous solution: Fixed bed column adsorption modelling and its adsorption mechanism, *Journal of Fluoride Chemistry*, *Journal of Fluorine Chemistry*, 2017, 194, 40-50.
15. Sweta Mohan, **Vijay Kumar**, Devendra Kumar Singh, Syed Hadi Hasan, Effective removal of Lead ions using Graphene oxide-MgO nanohybrid from aqueous solution: Isotherm, Kinetic and Thermodynamic modeling of adsorption. *Journal of Environmental Chemical Engineering*, 2017, <http://dx.doi.org/10.1016/j.jece.2017.03.031>.
16. Sweta Mohan, Devendra Kumar Singh, **Vijay Kumar**, Syed Hadi Hasan, Modelling of fixed bed column containing graphene oxide decorated by MgO nanocubes as adsorbent for Lead(II) removal from water, *Journal of Water Process Engineering*, 2017, 17, 216–228.

17. Devendra Kumar Singh, **Vijay Kumar**, Sweta Mohan, Syed Hadi Hasan, Performance and modeling of the fixed bed column containing graphene/polyethyleneimine aerogel for the removal of As(V) and As(III) from water. Separation Science and Technology (Under Review).
18. Kumar, V., Gupta, R. K., Gundampati, R. K., Singh, D. K., Mohan, S., Hasan, S. H., & Malviya, M. (2018). Enhanced electron transfer mediated detection of hydrogen peroxide using a silver nanoparticle–reduced graphene oxide–polyaniline fabricated electrochemical sensor. , 8(2), 619-631.
19. **Vijay Kumar**, Devendra Kumar Singh, Sweta Mohan, Daraksha Bano, Syed Hadi Hasan, Size-dependent synthesis of gold nanoparticles and its peroxidase-like mimetic activity for the detection of glutathione from human blood serum (ACS, Sustainable and Engineering Chemistry, [10.1021/acssuschemeng.8b00503](https://doi.org/10.1021/acssuschemeng.8b00503)).
20. **Vijay Kumar**, Devendra Kumar Singh, Sweta Mohan, Daraksha Bano, Syed Hadi Hasan, Peroxidase-like activity of green synthesized NC-AuNPs for the colorimetric detection of hydrogen peroxide (Communicated, ACS, Biomaterial).
21. **Vijay Kumar**, Daraksha Bano, Sweta Mohan, Devendra Kumar Singh, Peroxidase-like mimetic activity of AuNPs@RGO nanocomposite for the colorimetric detection of cholesterol (Communicated in Analyst).

Conferences

Kumar, V., Singh D.K., Hasan S.H., Photo-induced biosynthesis of silver nanoparticles using aqueous extract of *Erigeron bonariensis* and its catalytic activity against acridine orange, Proceeding of the “International Conference on Multifunctional Materials for Future Application” 8-10 Oct, 2015, organized by Department of Chemistry, IIT (BHU), Varanasi, India,

Kumar, V., Singh D.K., Hasan S.H., Photo-induced rapid biosynthesis of silver nanoparticle using aqueous extract of *Xanthium strumarium* and its antibacterial and antileishmanial activity, Proceeding of the “International Conference on Advanced Materials for Energy, Environment and Health (ICAM-2016)” 4-7 Mar. 2016, organized by Department of Chemistry, IIT Roorkee, Uttarakhand, India.

Kumar, V., Mohan S., Singh D.K., Hasan, S. H., Peroxidase-like activity of green synthesized gold nanoparticles for the colorimetric detection of glutathione, Techconnect Nanoworld, May 14-17, 2017, Washington D.C., USA.

Kumar, V., Mohan S., Singh D.K., Jagganatham, M., Hasan S. H., Peroxidase-like activity of green synthesized gold nanoparticles for the colorimetric detection of cholesterol, International Conference on "Advances in Biological System and Material Science in NanoWorld" Feb 19-23, 2017, IIT (BHU).