Publications of Dr. Vipin Kumar

Dr. Vipin Kumar
Professor
Department of Environmental Science and Engineering
Indian Institute of Technology (ISM) Dhanbad
Dhanbad – 826 004, Jharkhand, India

List of Research Publications in Refereed International and National Journals

**Corresponding author*

SCI/SCIE

1. Phukan, D., Kumar, V., Kandulna, W., Singh, A., Anand, S., & Pandey, N. 2024. Harnessing artificial neural networks to model caffeine degradation by High-Yield biodiesel algae *Desmodesmus pannonicus*. Bioresource Technology. 131935. (**IF = 11.889**) [Q1]. https://doi.org/10.1016/j.biortech.2024.131935.

2. Anand S., **Kumar V***., Singh A., Phukan D. and Pandey N. 2024. Statistical modelling, optimization, and mechanistic exploration of novel ureolytic Enterobacter hormaechei IITISM-SA3 in cadmium immobilization under microbial inclusive and cell-free conditions through microbially induced calcite precipitation. *Environmental Pollution*. 348: 123880. (**IF = 8.9**). [Q1]. https://doi.org/10.1016/j.envpol.2024.123880

3. Singh A, **Kumar V***., Anand S., Phukan D. and Pandey N. 2024. Mixed organic and inorganic nitrogen sources enhances chitosan production novel isolates for *Penicillium*". *International Journal of Biological Macromolecules*. 256 (1) 128115 (**IF = 8.20**) [Q1]. https://doi.org/10.1016/j.ijbiomac.2023.128115.

4. Singh A., **Kumar V***., Singh S. and Ray M. 2023. Electrochemical detection of copper(II) in environmental samples using *Penicillium* sp. IITISM_ANK1 based biosensor. *Chemosphere*. 313: 137294. (**IF = 8.943**). [Q1]. https://doi.org/10.1016/j.chemosphere.2022.137294.

5. Phukan D and **Kumar V***. 2023. Tracking drugged waters from various sources to drinking water—its persistence, environmental risk assessment, and removal techniques. *Environmental Science and Pollution Research.* (**IF = 5.80**) [Q1].
   DOI : 10.1007/s11356-023-28421-z.

6. Anand S., **Kumar V***. and Singh A. 2023. Recent advancements in cadmium-microbe interactive relations and their application for environmental remediation: a mechanistic overview. *Environmental Science and Pollution Research.* 30 (17009–17038). (**IF = 5.80**) [Q1]. https://doi.org/10.1007/s11356-022-25065-3

7. Singh S., **Kumar V***., Gupta P. and Ray M. 2022. Conjoint application of novel bacterial isolates on dynamic changes in oxidative stress responses of axenic *Brassica juncea* L. in Hg-stress soils. *Journal of Hazardous Materials*. 434(2022): 128854. https://doi.org/10.1016/j.jhazmat.2022.128854. (**IF = 14.224**) [Q1].

8. Singh S., **Kumar V***., Gupta P. and Ray M. 2022. The trafficking of HgII by alleviating its toxicity via *Citrobacter* sp. IIITISM25 in Batch and Pilot Scale Investigation. *Journal of Hazardous Materials*. 433(2022): 128711. https://dx.doi.org/10.2139/ssrn.4001140 (**IF = 14.224**) [Q1]

9. Ray M., Kumar V*. and Banerjee C. 2022. Kinetic modelling, production optimization, functional characterization and phyto-toxicity evaluation of biosurfactant derived from crude oil biodegrading *Pseudomonas* sp. IITISM 19. *Journal of Environmental Chemical Engineering*. 10(2), 2022, 107190, ISSN 2213-3437. https://doi.org/10.1016/j.jece.2022.107190. (**IF = 7.968**) [Q1]

10. Singh S., **Kumar V***., Gupta P., Ray M. and Kumar A. 2021. The synergy of mercury biosorption through Brevundimonas sp. IITISM22: Kinetics, isotherm, and thermodynamic modeling. *Journal of Hazardous Materials*. 415(2021):125653. https://doi.org/10.1016/j.jhazmat.2021.125653 (**IF = 14.224**) [Q1]

11. Singh A. and **Kumar V***. 2021. Recent developments in monitoring devise for anaerobic digesters: A focus on bio-electrochemical systems. *Bioresource Technology*. 326 (2021) 124937. https://doi.org/10.1016/j.biortech.2021.124937 (**IF = 11.889**) [Q1]

12. Rani R., **Kumar V***., Gupta P., and Chandra A. 2021. Potential use of Solanum lycopersicum and plant growth promoting rhizobacterial (PGPR) strains for the phytoremediation of endosulfan stressed soil. *Chemosphere* .279 (2021) 1305892 https://doi.org/10.1016/j.chemosphere. 2021.130589. (**IF = 8.943**). [Q1]

13. Ray M., **Kumar V***., Banerjee C., Gupta P., Singh S., Singh A. 2021. Investigation of biosurfactants produced by three indigenous bacterial strains, their growth kinetics and their anthracene and fluorene tolerance. *Ecotoxicology and Environmental Safety* 208(2021): 111621 . https://doi.org/10.1016/j.ecoenv.2020.111621 (**IF = 7.129**) [Q1]

14. Singh A. and **Kumar V***. 2021. Recent advances in synthetic biology–enabled and natural whole-cell optical biosensing of heavy metals. Analytical and Bioanalytical Chemistry. 413:73–82. https://doi.org/10.1007/s00216-020-02953-6. (**IF = 4.478**) [Q2]

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18. Pandey V, Ray M, **Kumar V***. 2020. Assessment of water-quality parameters of groundwater contaminated by fly ash leachate near Koradi Thermal Power Plant, Nagpur. *Environmental Science Pollution Research*. 27: 27422–27434 doi:10.1007/s11356-019-06167-x. **(IF = 5.80)** [Q1]

19. Neha., Tarafdar, A., Sinha, A*. and **Kumar, V**. (2020). Effect of glucose co-metabolism on biodegradation of Gabapentin (an anticonvulsant drug) by gram-positive bacteria

Micrococcus luteus N.ISM.1". *Applied Biochemistry and Microbiology.* 56(4):433-440 (**IF 1.065**) [Q4].

20. Gupta P., **Kumar V***., Usmani Z., Rani R., Chandra A., and Gupta V.K. 2019. A comparative evaluation towards the potential of *Klebsiella* sp. and *Enterobacter* sp. in plant growth promotion, oxidative stress tolerance and chromium uptake in *Helianthus annuus* (L.). *Journal of Hazardous Materials* 377:391-398. DOI:10.1016/j.jhazmat.2019.05.054 (**IF = 14.224**) [Q1]

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25. Mishra, S., Singh, K., Sahu, N., Singh, S. N., Manika, N., Jain, M. K., **Kumar, V**., Behera, S. K. 2019. Understanding the relationship between soil properties and litter chemistry in three forest communities in tropical forest ecosystem. *Environmental Monitoring Assessment*. 191, 797. doi:10.1007/s10661-019-7691-x. **(IF = 3.307)** ISSN: 0167-6369 [Q3]

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index in groundwater. *Ecological Indicators*. 97: 239-246. DOI: 10.1016/j.ecolind.2018.10.023. (**IF = 6.263**). ISSN: 1470-160X [Q1]

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58. Usmani Z. and **Kumar V***. 2017. The Implications of Fly Ash Remediation Through Vermicomposting: A Review. *Nature Environment and Pollution Technology*. 16(2): 363-374. (**H Index =5**). ISSN: 0972-6268**.**

59. **Kumar V***., Chandra A. and Usmani Z. 2017. Impact of coal mining on soil properties and their efficient eco-restoration. *International Journal of Energy Technology and Policy*. DOI: 10.1504/IJETP.2017.10000607. 13(1-2): 158-165. **(H Index =11).**

60. Usmani Z. and **Kumar V***. 2016. Management of Fly Ash through Vermicomposting: A Rational Approach. *Environmental Quality Management*. DOI: 10.1002/tqem.21461. 25(3): 53-66. **(H Index =9).**

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64. Kumar V*., Chandra A., Behera A. and Jain M. K. 2015. Adsorption kinetics and equilibrium studies of heavy metals removal using Musa sapientum stems - a low cost agro waste biosorbent. *Journal of Environmental Science and Engineering*. 57(4): 287-293. (**H Index =22**).

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Book Chapters

1. Phukan, D. and Kumar, V., 2024, December. Unlocking the Potential of Immobilized *Scenedesmus* sp. for Paracetamol Removal from Wastewater Coupled with Protein and Lipid Yield Enhancement. In National Conference on Technological Advancements in Waste Management: Challenges and Opportunities (pp. 415-424). Singapore: Springer Nature Singapore.
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5. Singh Ankur, Vipin Kunar and Sarika .“Fungi-based biosensing platforms for detection of heavy metals: focus on the eukaryotic system”. Trends in Biological Processes in Industrial Wastewater Treatment, 2024. IOP e-books.

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15. Gupta P., Rupa, R., Chandra A., Varjani S. J., **Kumar V***. 2018. The role of microbial consortium in chromium bioremediation of tannery effluent. In: Water and Wastewater Treatment Technologies. Springer, Singapore.
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Dr. Vipin Kumar

Updated on Dec 2024.