

CURRICULUM VITAE

Dr. Vipin Kumar

Associate Professor

Department of Environmental Science and Engineering

Indian Institute of Technology

(Indian School of Mines) Dhanbad

Dhanbad – 826 004, Jharkhand, India

Contact : +91-326-2235643 (O); +91-326-2235743 (R);
+91-9471191352 (M)

E-mail : vipinmicro1@gmail.com

Fax No. : +91-326-2296624

Date of birth : January 7th, 1980

Sex : Male

Marital Status : Married



Area of Interest:

Microbial remediation of various pollutants, Biological treatment of solid waste, Fly-ash utilization, Biological reclamation of soil.

Educational Qualification:

- **Ph.D. Environmental Science (Specialization in Microbiology)** in 2008

Ph.D. Thesis: "Impact studies of Fly-ash as a carrier in Bio-formulations, Shelf life, Bio-efficacy and Genetic variation".

- **M.Sc. Microbiology** with CGPA 09.13 out of 10.00 (86.74%)

M.Sc. Thesis: "Incidence of Beta-lactamase producing Gram-negative Clinical isolates and their Antibiotic susceptibility pattern".

Professional Experience:

| Employer | Position held | Date of Joining | Date of Leaving | Pay with Scale of pay |
|--------------------|---------------------|-----------------|-----------------|---------------------------------|
| IIT (ISM), Dhanbad | Associate Professor | 06-06-2019 | Till date | 148100 |
| IIT (ISM), Dhanbad | Assistant Professor | 01-01-2017 | 05-06-2019 | 139400 |
| IIT (ISM), Dhanbad | Assistant Professor | 06-09-2016 | 31-12-2016 | PB-4 + 9000 |
| IIT (ISM), Dhanbad | Assistant Professor | 06-09-2013 | 05-09-2013 | PB-3 + 8000 |
| ISM, Dhanbad | Assistant Professor | 13.03.2013 | 05-09-2013 | PB-3 + 7000 |
| ISM, Dhanbad | Assistant Professor | 10-03-2010 | 09-03-2013 | PB-3 + 6000 |
| SHIATS, Allahabad | Research Associate | 01-11-2009 | 09-03-2010 | 14,000 pm (DBT, GoI fellowship) |
| SHIATS, Allahabad | SRF | 01-11-2007 | 31-10-2009 | 12,000 pm (DBT, GoI fellowship) |

Major achievements: (Details are given below)

No. of Ph. D Supervised as: Guide: **10**; Co-Guide: **02**
No. of Ph. D Supervising as Guide/Co-Guide: Guide: **05**; Co- guide: **01**
No. of project (Research & consultancy) as PI/CI/Co-CI: **11**
No. of short term Course conducted as CI/Co-CI: **08**
No. of research publication published in reputed Journals: **79**
No. of Book/Book chapters Authored: **07**
No. of research project proposal submitted: **05**

Teaching record:

I am teaching following undergraduate and postgraduate courses:

| Sl. No. | Subjects |
|---------|---|
| i. | I and II B. Tech (Common): Earth System Science |
| ii. | III B. Tech (Env. Engg.): Environmental Biology and Ecology |
| iii. | IV B. Tech (Env. Engg.): Environmental Microbiology |
| iv. | VI B. Tech (Env. Engg.): Solid Waste Management |
| v. | VII B. Tech (Mineral Engg.): Pollution Control & Environment Management |
| vi. | VII B. Tech (Civil Engg.): Solid Waste Management |
| vii. | VIII B. Tech (Env. Engg.): Hazardous and Biomedical Waste Management |
| viii. | I M. Tech (ESE): Ecology, Biodiversity and Environmental Microbiology |
| ix. | II M. Tech (MLE): Pollution Control and Waste Management |

As per the student feedback, I have been rated always ~ 09/10 with excellent comments (Can be seen in MIS of IIT (ISM) feedback system).

Institutional Administrative Assignment:

- Coordinator (Environment): Centre for Earth, Energy and Environmental Research
- Secretary, DAC (2013-2019)
- Co-coordinator, ENVIS Centre, IIT (ISM), Dhanbad (2017 - continuing)
- Faculty In charge, Laboratory of Applied Microbiology
- Warden, Amber Hostel (2019 - continuing)
- Faculty In charge, Time Table Committee (2011- 2016)
- Faculty Coordinator B. Tech programs (2nd year)
- Faculty In charge, Tech Fest (Concetto), IIT (ISM)
- Member, IIT-JEE Admission Committee
- Member, IIT (ISM)/JRF Admission Committee
- Member, DUGC
- Member, Anti-ranging scouts
- Member, Tabulation Committe
- Member, various DSC Committees

Ph.D Thesis Guided/Guiding

| Sl. No. | Student's name & Reg. No. | Date of Joining | Topic | Status | Role |
|------------------|------------------------------------|-----------------|--|-----------|----------|
| Full Time | | | | | |
| 1 | Tripti (2010 DR0029) | September, 2010 | Study on Pesticide Tolerant Bacteria and Their Phosphate Solubilization Activity: An Approach towards Bio-fertilizer Preparation. | Awarded | Guide |
| 2 | Shrabani Sen (2010DR0046) | December, 2010 | A Comparative Study of Different Manures And Fly-Ash to Find Out Their Optimum Combination for Efficient Re-Vegetation of Overburden Dumps in Jharia Coal-Field. | Awarded | Guide |
| 3 | Ashwani Kumar (2012DR0086) | July, 2012 | Analysis of contaminant transfer from coal-fired thermal power plant in soil, surface water and ground water | Awarded | Co-guide |
| 4 | S. K. Mritunjay (2013DR0034) | January, 2013 | Microbiological Safety Evaluation and Recommendation of Raw Eaten Salad Vegetables | Awarded | Guide |
| 5 | Zeba Usmani (2013DR0245) | July, 2013 | Study on heavy metals accumulation from coal fly-ash through Vermicomposting using Indigenous earthworm species | Awarded | Guide |
| 6 | Arti Hansda (2013DR0263) | July, 2013 | Isolation and characterization of Cu (II) remediating <i>Pseudomonas</i> sp. and their plant growth promoting activity | Awarded | Guide |
| 7 | Gauri Gupta (2014DR0001) | January, 2014 | Effectiveness of degradation potential of polycyclic aromatic hydrocarbons by bacterial consortium | Awarded | Guide |
| 8 | Mamta Besra, (2014DR0058) | January, 2014 | Studying the antimicrobial activities of herbal plants extract with special emphasis on dental caries | Awarded | Guide |
| 9 | Rupa Rani (2014DR0138) | July, 2014 | Biodegradation of organochlorine pesticides by plant growth promoting rhizobacteria (PGPR) | Awarded | Guide |
| 10 | Aaditya Chaturvedi (2014DR1126) | July, 2014 | Geo-Environmental Study of Groundwater Resources of Subarnarekha River Basin with Special Reference to Pesticides and Heavy Metal Distribution | Awarded | Guide |
| 11 | Shruti Mishra (2015DR1167) | July, 2014 | "Dynamics of Soil CO ₂ sequestration in Tropical Deciduous Forest Ecosystem of Northern India" | Awarded | Co-Guide |
| 12 | NEHA (2015DR0037) | Jan, 2015 | Biodegradation of Pharmaceutical byproducts in Soils through Solid State Fermentation | Submitted | Co-Guide |
| 13 | Pratishtha Gupta (2015DR0184) | July, 2015 | Microbial-assisted Phytoremediation and assay of chromate reductase enzyme in effective remediation of hexavalent chromium from contaminated agricultural soils | Awarded | Guide |
| 14 | Madhurya Ray (17DR000517) | July, 2017 | Enhancement of biosurfactant production by co-culture of oil degrading bacteria for efficient oil pollution remediation | Ongoing | Guide |
| 15 | Shalini Singh (17DR000547) | July, 2017 | Enhanced mercury biosorption and assay the mercuric reductase by bacterial strains: An innovative approach to effective mercury(II) bioremoval | Ongoing | Guide |
| 16 | Ankur Singh (18DR0034) | July, 2018 | Microbial Biosensors: A novel approach for detection and quantification of heavy metals | Ongoing | Guide |
| 17 | Bhanu Pratap Singh (19DR0027) | July, 2019 | Recovery of copper through microbial mediated phytomining | Ongoing | Guide |
| 18 | Saumya Anand (19DR0136) | July, 2019 | Studies on toxicity and mechanisms of bacterial enzymes mediated cadmium removal | Ongoing | Guide |

Details of the Project Assignment Ongoing:

| Sl. No. | Title | Funding agency | Role | Amounts (Lacs) | Status |
|---------|---|-------------------|-------|----------------|---------|
| 1. | Recovery of copper from water bodies nearby copper mines using microbial electrochemical systems. (MoM/2020-2021/773/ESE) | Ministry of Mines | PI | 25.00 | Ongoing |
| 2. | Health, Safety and Environmental study of Iron Ore Mines (Vedanta/2018-2019/598/ESE) | Vedanta | PI | 8.85 | Ongoing |
| 3. | Land use Land cover study for Jharia group of collieries and washeries, Tata Steel. (TataSteel/2020-2021/719/ESE) | Tata Steel | Co-PI | 23.60 | Ongoing |

Details of the Project Assignment Undertaken:

| Sl. No. | Title | Funding agency | Role | Amounts (Lacs) | Status |
|---------|---|-----------------------------|---------------|----------------|-----------|
| 1. | Environmental Impact Studies of Chotia Coal Mines (Cons/3367/16-17) | BALCO | PI | 16.10 | Completed |
| 2. | Assessment of soil fertility through the application of Fly-ash based Bio-fertilizer in combination with Bio-compost. Sanction no. FRS (23)/2010-2011/ ESE. | MHRD | PI | 5.64 | Completed |
| 3. | Soil and fly-ash characteristics for mine backfilling of Chotia Mines, Chhattisgarh. (Cons/3252/16-17) | BALCO | CI | 1.64 | Completed |
| 4. | Utilization of Fly-ash as carrier in Bio-fertilizer and Bio-pesticide formulation. Sanction no. 2010/MRP/ESE/08/ Acad. | MHRD | PI | 0.95 | Completed |
| 5. | Biodegradation of polycyclic aromatic hydrocarbons by efficient bacterial consortium | TEQIP - II | PI | 1.50 | Completed |
| 6. | Regional Environmental Impact Assessment study of Goa region MoEF(13)/2011-12/294/ESE | MoEF | Co-PI | 202.22 | Completed |
| 7. | Microbiological quality of drinking water. (CONS/2849/15-16) | Sky Lark, Dhanbad | CI | 0.11 | Completed |
| 8. | Biodiversity study at Rolep Hydro project, Sikkim (CONS/2731/15-16) | Velanakani Energy Pvt. Ltd. | Co-CI | 11.90 | Completed |
| 9. | Water quality of drinking water. (CONS/3495/17-18) | Sky Lark, Dhanbad | CI | 0.11 | Completed |
| 10 | Monitoring of Environmental parameters in respect of ambient air, stack monitoring, noise level and effluent discharge at BTPS B (O&M) CONS/1440/11-12 | BTPS | Expert Member | 5.23 | Completed |
| 11 | Study on Compliance of Forestry Clearance condition in respect of Ghanoodih and Bera Projects of Bastacolla Area, BCCL, Dhanbad. | BCCL | Expert Member | 12.68 | Completed |
| 12 | Preparation of EIA of Patherdih Coal Washery, BCCL, Dhanbad | BCCL | Expert Member | 17.00 | Completed |
| 13 | Preparation of EIA of Dugda Coal Washery, BCCL, Dhanbad | BCCL | Expert Member | 17.00 | Completed |
| 14 | EIA Studies in the impact of leaching due to storage of fly-ash on the surface and mined voids on dumping area of Rajrappa site. (CONS/2296/2013-14) | Hindalco Muri | Expert Member | 15.16 | Completed |
| 15 | Waste water management and control of water pollution from plant and mines of BIOM, Bachel complex, Dantewada, Chhattisgarh. | NMDC, Limited | Expert Member | 14.25 | Completed |
| 16 | Road transport impact study (Cons/3821/18-19) | RKM TPP, Raigarh | Expert Member | 4.425 | Completed |
| 17 | Source sustainability study of water requirement | RKM TPP | Expert | 7.75 | Completed |

| | | | | | |
|----|---|----------------|---------------|-------|-----------|
| | (Cons/3766/17-18) | Raigarh | Member | | |
| 18 | Hydrological Source sustainability study of water requirement (Cons/3748/17-18) | DB TPP Raigarh | Expert Member | 12.25 | Completed |
| 19 | Development of EPRI of coal mines. (Cons/3812/18-19) | CIL | Expert Member | 11.80 | On going |

Details of the Short term course/Training program organized:

| Sl. No. | Title | Duration | Role | Amounts (Lacs) | Status |
|---------|--|------------------------|-----------------------|----------------|-----------|
| 1. | Sustainable waste management practices. (CONS/3097/15-16) | 17-19 Feb, 2016 | Course Coordinator | 2.85 | Completed |
| 2. | Recent Trends in waste management practices. (CONS/3221/16-17) | 02-04 June, 2016 | Course Coordinator | 3.09 | Completed |
| 3. | Ambient air quality assessment, prediction and control. (Cons/3236/16-17) | 11-15 July, 2016 | Course Co-coordinator | 2.40 | Completed |
| 4. | Advanced Treatment of solid and Hazardous Waste. (Cons/3329/16-17) | 18-22 Oct, 2016 | Course Coordinator | 1.855 | Completed |
| 5. | Env. Clearance Procedures and Impact assessment of Mining project. (Cons/3520/17-18) | 7-11 June, 2017 | Course Co-coordinator | 2.75 | Completed |
| 6. | Air and Noise Quality Assessment, Prediction and Control for Industrial Areas | May, 15-18, 2018 | Course Co-coordinator | 3.60 | Completed |
| 7. | Certificate Course on Green Skill Development on Pollution Monitor: Air and Water | Aug 13 to Oct 12, 2018 | Training In-charge | 15.04 | Completed |
| 8. | Certificate Course on Green Skill Development on Pollution Monitor: Air and Water | June - Aug, 2019 | Training In-charge | 15.19 | Completed |
| 9. | Certificate Course on Green Skill Development on Waste Management | Jan - March 2020 | Training In-charge | 16.55 | Completed |

M. Tech Dissertation Guided/Guiding

| Sl. No. | Student's Name | Year | Topic | Role | Status |
|---------|-------------------|-----------|--|-------|-----------|
| 1. | Om Shakar | 2018-2019 | Electroremediation of mercury from contaminated soil | Guide | Ongoing |
| 2. | Bhanu P. Singh | 2018-2019 | Recovery of Cu from mill tailings | Guide | Ongoing |
| 3. | Anand | 2018-2019 | Development of value added bacterial concrete | Guide | Ongoing |
| 4. | Dhiraj Kumar | 2018 | Microbiological removal of Phosphorous from Linz-Donawitz Slag | Guide | Completed |
| 5. | Mohd Faraz Khan | 2018 | Removal of Multiple Metals From Tannery Industries Contaminated Soil by Beneficial Plants-Microbes Interaction | Guide | Completed |
| 6. | Saurabh Suman | 2018 | Enhancing degradation of Institutional bio-degradable solid waste using a natural source of essential microorganisms | Guide | Completed |
| 7. | Uma A | 2017 | Role of <i>Sporosarcina pasteurii</i> in performance enhancement of concrete | Guide | Completed |
| 8. | Brij Nandan Kumar | 2017 | Isolation of calcifying bacteria and its utilization in fly ash bricks | Guide | Completed |

| | | | | | |
|-----|-----------------------|------|--|----------|-----------|
| 9. | Madhurya Ray | 2017 | Microbial diversity in mining and non-mining area with emphasis on plant growth promoting rhizobacteria | Guide | Completed |
| 10. | Aakankshya Das | 2016 | Endosulfan degradation by using Plant Growth Promoting Rhizobacteria (PGPR) | Guide | Completed |
| 11. | Pankaj Kumar | 2016 | Bacterial degradation of Anthracene | Guide | Completed |
| 12. | Amrita Pandit | 2015 | Biodegradation of Polycyclic Aromatic Hydrocarbons | Guide | Completed |
| 13. | Kumar Partha S. Das | 2015 | Electricity generation from wastewater using a microbial fuel cell on a lab scale | Guide | Completed |
| 14. | Madhukar Kumar | 2014 | Estimation of calorific value of biomass Briquettes prepared from sawdust and paper waste | Guide | Completed |
| 15. | Amartanshu Srivastava | 2014 | Planning of Mine closure with demarcation of ESZ in Goa region | Guide | Completed |
| 16. | Vikash Pandey | 2013 | Characterization and Impact of coal mine leachate on water regime and its management | Guide | Completed |
| 17. | Ritika Mukharji | 2013 | Remediation of Halogenated Pesticides by Nano Zero-Valent Iron (nZVI) Particles Extracted from Steel Industry Waste | Co-Guide | Completed |
| 18. | Arabinda Bahera | 2012 | Impact studies of Coal Mine Leachate on Different Water Bodies | Guide | Completed |
| 19. | Gourav Jatav | 2012 | Effects of Mine waste Contamination at Multiple Levels of Soil | Guide | Completed |
| 20. | Seema Kumari | 2011 | Comparative Study of Soil Quality And Carbon Flux of Different Land Use Type at Dugdha Coal washery area of Jharia Coalfield | Guide | Completed |

Membership of Association/ Societies:

- i. Fellow of Geological Society of India. (F. No. 3325)
- ii. Life member of Geological Society of India. (LM No. 1733)
- iii. Life member of The Mining, Geological & Metallurgical Institute of India, Kolkata (LM No. 10126)
- iv. Life member of Indian Water Works Association (IWWA) Mumbai. (LM No. 7266)
- v. Life member of The Indian Science Congress Association, Kolkata (LM No. L 20805)

List of Research Publications in Refereed International and National Journals

*Corresponding author

SCI/SCIE

1. 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*. 415:125653. <https://doi.org/10.1016/j.jhazmat.2021.125653> (IF 9.038) [Q1]
2. 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 7.539) [Q1]
3. 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. <https://doi.org/10.1016/j.ecoenv.2020.111621> (IF 4.872) [Q1]

4. 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* (2021) 413:73–82. <https://doi.org/10.1007/s00216-020-02953-6>. (IF 3.637) [Q2]
5. Singh S., **Kumar V***., Gupta P., Ray M. and Singh A. 2021. An implication of biotransformation in detoxification of mercury contamination by *Morganella* sp. strain IITISM23. *Environmental Science and Pollution Research*. Online published. <https://doi.org/10.1007/s11356-021-13176-2> (IF 3.056) [Q2]
6. Gupta P., **Kumar V***., Usmani Z., Rani R., Chandra A., Gupta V.K. 2020. Implications of plant growth promoting *Klebsiella* sp. CPSB4 and *Enterobacter* sp. CPSB49 in luxuriant growth of tomato plant under chromium stress. *Chemosphere* 240. doi: 10.1016/j.chemosphere.2019.124944 (IF 5.778) [Q1]
7. Singh S. and **Kumar V***. 2020. Mercury detoxification by absorption, mercuric ion reductase, and exopolysaccharides: A Comprehensive study. *Environmental Science and Pollution Research* 27: 27181-27201. DOI: 10.1007/s11356-019-04974-w (IF =3.056) [Q2]
8. 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 3.056) [Q2]
9. 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 1.022) [Q4].
10. 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 = 9.038) [Q1]
11. Usmani Z., **Kumar V***., Gupta G., Gupta P., Rani R., Chandra V. 2019. Efficacy of vermicomposted fly ash with enhanced plant growth promoting and microbial enzymatic activities on soil fertility, plant growth and yield of vegetable plants. *Nature Scientific Reports*, 9, 10455. <https://doi.org/10.1038/s41598-019-46821-5> (IF 4.011) [Q1]
12. Rani R., **Kumar V***., Usmani Z., Gupta P., and Chandra A. 2019. Influence of plant growth promoting rhizobacterial strains *Paenibacillus* sp. IITISM08, *Bacillus* sp. PRB77 and *Bacillus* sp. PRB101 using *Helianthus annuus* on degradation of endosulfan from contaminated soil. *Chemosphere* 225: 479-489. DOI: 10.1016/j.chemosphere.2019.03.037. (IF =5.778). [Q1]
13. Kushwaha B. K., Singh S., Tripathi D. K., Sharma S., Prasad S. M., Chauhan D K., **Kumar V.** and Singh V. P*. 2019. New adventitious root formation and primary root biomass accumulation are regulated by nitric oxide and reactive oxygen species in rice seedlings under arsenate stress. *Journal of Hazardous Materials*. 361: 134-140. DOI: 10.1016/j.jhazmat.2018.08.035. (IF = 9.038) [Q1].

14. Rani R., **Kumar V***, Gupta P., and Chandra A. 2019. Effect of endosulfan tolerant bacterial isolates (*Delftia lacustris* IITISM30 and *Klebsiella aerogenes* IITISM42) with *Helianthus annuus* on remediation of endosulfan from contaminated soil. *Ecotoxicology and Environmental Safety*. 168: 315-323. DOI: 10.1016/j.ecoenv.2018.10.059. (IF =4.872) [Q1].
15. 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 1.959) ISSN: 0167-6369 [Q3]
16. Mishra S, Chaudhary L B., Jain M K., **Kumar V.** 2019. Interaction of abiotic factor on soil CO₂ efflux in three forest communities in tropical deciduous forest from India. *Environmental Monitoring and Assessment* 191: 796. (IF =1.959). ISSN: 0167-6369 [Q3]
17. Kumar, A., Samadder, S.R. and **Kumar. V.** 2019. Assessment of groundwater contamination risk due to fly ash leaching using column study. *Environmental Earth Sciences* 78: 18. DOI: 10.1007/s12665-018-8009-y. (I.F = 2.18) [Q2]
18. Gupta P., Rani R., Chandra A. and **Kumar V***. 2018. Potential applications of *Pseudomonas* sp. (strain CPSB21) to ameliorate Cr⁶⁺ stress and phytoremediation of tannery effluent contaminated agricultural soils. *Nature Scientific Reports*. 8(1): 4860. DOI: 10.1038/s41598-018-23322-5. (IF = 4.011) [Q1].
19. Gupta P., **Kumar V***, Usmani Z., Rani R. and Chandra A. 2018. Phosphate solubilization and chromium (VI) remediation potential of *Klebsiella* sp. strain CPSB4 isolated from the chromium contaminated agricultural soil. *Chemosphere*. 192: 318-327. DOI: 10.1016/j.chemosphere. 2017.10.164. (IF = 5.778). ISSN: 0045-6535 [Q1]
20. Chaturvedi A., Bhattacharjee S., Mondal D C., **Kumar V.** Singh P K and Singh A K*. 2019. Exploring new correlation between hazard index and heavy metal pollution index in groundwater. *Ecological Indicators*. 97: 239-246. DOI: 10.1016/j.ecolind.2018.10.023. (IF 4.490). ISSN: 1470-160X [Q1]
21. Chaturvedi A., Bhattacharjee S., Singh A K*. and **Kumar V.** 2018. A new approach for indexing groundwater heavy metal pollution. *Ecological Indicators*. 87: 323-331. DOI: 10.1016/j.ecolind.2017.12.052. (IF = 4.490). ISSN: 1470-160X [Q1]
22. Besra M. and **Kumar V***. 2018. In vitro investigation of antimicrobial activities of ethnomedicinal plants against dental caries pathogens. *3Biotech* 8: 257 DOI: 10.1007/s13205-018-1283. (IF = 1.798) [Q3]
23. Usmani Z., **Kumar V***, Rani R., Gupta P. and Chandra A. 2018. Changes in physico-chemical, microbiological and biochemical parameters during composting and vermicomposting of coal flyash: A comparative study. *International Journal of Environmental Science and Technology*. 16 (8), 4647-4664. DOI: 10.1007/s13762-018-1893-6. (IF = 2.54) [Q2]
24. Rani R., Usmani Z., Gupta P., **Kumar V***, Chandra A. and Das A. 2017. Effects of organochlorine pesticides on plant growth-promoting traits of phosphate solubilizing rhizobacterium, *Paenibacillus* sp. IITISM08. *Environmental Science and Pollution Research*. 25(6), 5668-5680. DOI 10.1007/s11356-017-0940-z. (IF =3.056) [Q2]
25. Ray M., Usmani Z., Chandra A., **Kumar V*** and Jain M. K. 2017. Bacterial diversity in mining and non-mining regions with emphasis on plant growth promoting traits. *Chemistry and Ecology*. 33(9): 826-842. DOI: 10.1080/02757540.2017.1389909. (IF = 1.4). ISSN: 0275-7540 [Q3]
26. Pandey V., Usmani Z., Chandra A., Mishra R. K. and **Kumar V***. 2017. Environmental impact of leaching of trace elements from fly ash dumps on aquatic ecosystems.

Chemistry and Ecology. 33(8): 777-794. DOI: 10.1080/02757540.2017.1376663. (IF = 1.4). ISSN: 0275-7540 [Q3]

27. Gupta G., **Kumar V***. and Pal A.K. 2017. Microbial degradation of high molecular weight polycyclic aromatic hydrocarbons with emphasis on Pyrene. *Polycyclic Aromatic Compounds* 39: 124-138. DOI: 10.1080/10406638.2017.1293696. (IF = 1.894). ISSN: 1040-6638 [Q3]
28. Usmani Z. and **Kumar V***. 2017. Characterization, partitioning and potential ecological risk quantification of trace elements in coal fly ash. *Environmental Science and Pollution Research*. 24(18): 15547-15566. DOI: 10.1007/s11356-017-9171-6 (IF =3.056). ISSN: 0944-1344 [Q2]
29. Kumar S., Hansda A., Chandra A., Kumar A., Kumar M., Sithambaresan A., Faizi S.H., **Kumar V**. and John R. P*. 2017. Co(II), Ni(II), Cu(II) and Zn(II) complexes of acenaphthoquinone 3-(4-benzylpiperidyl)thiosemicarbazone: Synthesis, structural, electrochemical and antibacterial studies. DOI: 10.1016/j.poly.2017.05.055. *Polyhedron*. 134: 11-21. (IF =2.343). ISSN: 0277-5387 [Q2]
30. Usmani Z. and **Kumar V***. 2017. Metal bioaccumulation in tissues of *Puntius sarana* and *Labeo rohita* and its associated risk status: A case study of Damodar River, India. *Desalination and Water Treatment*. 76: 196-211. DOI: 10.5004/dwt.2017.20719. (IF =1.234). [Q3]
31. Hansda A., **Kumar V***. and Anshumali. 2017. Cu-resistant *Kocuria* sp. CRB15: a potential PGPR isolated from the dry tailing of Rakha copper mine. *3Biotech*. 7: 132. DOI: 10.1007/s13205-017-0629-5. ISSN: 2190-5738. (IF = 1.798). [Q3]
32. Rani R. and **Kumar V***. 2017. Endosulfan Degradation by Selected Strains of Plant Growth Promoting Rhizobacteria. *Bulletin of Environmental Contamination and Toxicology*. 99:138-145. DOI: 10.1007/s00128-017-2102-x. (IF =1.657). ISSN: 0007-4861 [Q3]
33. Mritunjay S. K. and **Kumar V***. 2017. **A study on prevalence of microbial contamination on the surface of raw salad vegetables.** *3Biotech*. 7: 13. DOI: 10.1007/s13205-016-0585-5. (IF = 1.798). ISSN: 2190-5738 [Q3]
34. Singh M. K., Roy S., Hansda A., Kumar S., Kumar M., **Kumar V.**, Peter S. C., and John R. P*. 2017. Synthesis, characterisation and antibacterial activity evaluation of trinuclear Ni(II) complexes with N-substituted salicylhydrazide ligands. DOI: 10.1016/j.poly.2017.01.019. *Polyhedron*. 126: 100-110. (IF =2.343). ISSN: 0277-5387 [Q2]
35. Usmani Z. and **Kumar V***. 2017. Vermicomposting of Coal Fly ash using Epigeic and Epi-endogeic Earthworm Species: Nutrient Dynamics and Metal Remediation. *RSC Advances*. 2017(7): 4876-4890. DOI: 10.1039/c6ra329g. (IF =3.119) [Q2]
36. Singh M., Kushwaha B. K., Singh S., **Kumar V.**, Singh V. P*. and Prasad S. M*. 2017. Sulphur alters chromium (VI) toxicity in *Solanum melongena* seedlings: Role of sulphur assimilation and sulphur-containing antioxidants. *Plant Physiology and Biochemistry*. 112(2017): 183-192. DOI: 10.1016/j.plaphy.2016.12.024. (IF = 3.72). ISSN: 0981-9428 [Q1]
37. Mritunjay S. K. and **Kumar V***. 2017. Microbial quality, safety and pathogen detection using qPCR of raw salad vegetables sold in Dhanbad City, India. *Journal of Food Protection*. 180(1): 121-126. DOI:10.4315/0362-028X.JFP-16-223 (IF =1.581). ISSN: 0362-028X [Q3]
38. Hansda A., **Kumar V***. and Anshumali. 2017. Influence of Cu fractions on soil microbial activities and risk assessment along Cu contamination gradient. *Catena*. 151: 26-33. DOI: 10.1016/j.catena.2016.12.003. (IF = 4.333) [Q1]
39. Tripti, Kumar A., Usmani Z., **Kumar V**. and Anshumali. 2017. Biochar and fly ash inoculated with plant growth promoting rhizobacteria act as potential biofertilizer for

- luxuriant growth and yield of tomato plant. *Journal of Environmental Management*. 190: 20-27. DOI: org/10.1016/j.jenvman.2016.11.060. (IF =) [Q1]
40. Gupta P. and **Kumar V***. 2017. Value added phytoremediation of metal stressed soils using phosphate solubilizing microbial consortium. *World Journal of Microbiology and Biotechnology*. 33(1): 9. DOI :10.1007/s11274-016-2176-3. (IF =2.652) [Q2]
41. Besra M. and **Kumar V***. 2016. Antimicrobial Activity of Essential oils and Herbal Extracts against Etiological Agent of Dental Caries. *Journal of Essential Oil Bearing Plants* 19(7): 1807-1815. DOI:10.1080/0972060X.2015.1029988. (IF = 0.824). [Q4]
42. Gupta G, **Kumar V***. and Pal A.K. 2016. Biodegradation of Polycyclic Aromatic Hydrocarbons by Microbial Consortium: A distinctive approach for decontamination of Soil. *Soil and Sediment Contamination: An International Journal*. 25(6): 597-623. DOI:10.1080/15320383.2016.1190311. (IF = 0.992) [Q4]
43. Hansda A., **Kumar V.** and Anshumali. 2016. A comparative review towards potential of microbial cells for heavy metal removal with emphasis on Biosorption and Bioaccumulation. *World Journal of Microbiology and Biotechnology*. 32:170. DOI: 10.1007/s11274-016-2117-1. (IF =2.652) [Q2]
44. Sen S. and **Kumar V***. 2016. Evaluating soil quality and bio-efficacy study of *Cajanus cajan* L. in coal-mine degraded land. *Turkish Journal of Agriculture and Forestry*. 40: 499-511. DOI: 10.3906/tar-1406-21. (IF = 1.731) [Q2]
45. Tripti, Kumar A., **Kumar V.** and Anshumali. 2015. Effect of commercial pesticides on plant growth promoting activities of *Burkholderia* sp. Strain L₂ isolated from rhizosphere of *Lycopersicon esculentum* cultivated in agricultural soil. *Toxicological & Environmental Chemistry*. DOI: 10.1080/02772248.2015.1093632. 97(9): 1180-1189. (IF = 1.05) [Q4]
46. Chandra A., **Kumar V***. and Jain M. K. 2015. The seasonal changes in soil properties due to coal mine impacts. *Carpathian Journal of Earth and Environmental Sciences*. 10(1): 241-248. (IF = 1.307) [Q4]
47. Mukherjee, R., Sinha A*, Lama Y. and **Kumar V.** 2015. Utilization of Zero Valent Iron (ZVI) Particles Produced from Steel Industry Waste for In-Situ Remediation of Ground Water Contaminated with Organo-Chlorine Pesticide Heptachlor. *International Journal of Environmental Research*. 9(1): 19-26. (IF = 2.007) [Q3]

SCOPUS

48. 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.
49. **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).
50. 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).
51. Lothe A.G. Hansda A. and **Kumar V*** (2016): Phytoremediation of Copper Contaminated Soil using *Helianthus annuus*, *Brassica nigra* and *Lycopersicon esculentum* Mill. : A Pot Scale Study. *Environmental Quality Management*. DOI: 10.1002/tqem.21463. 25(4): 63-70. (H Index = 9).

52. Chandra A., **Kumar V***. and Jain M. K. 2016. Impact of open cast coal mining on groundwater quality around Jharia coal field area, India. *Journal of Environmental Science and Engineering*. 58(1): 65-76. **(H Index =22)**.
53. Sen S. and **Kumar V***. 2016. Study on effectiveness of various soil amendments on soil properties, growth pattern of *Cajanus cajan* L. *Journal of Environmental Science and Engineering*. 58(2): 123-130. **(H Index =22)**.
54. 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)**.
55. Chandra A., Kumar V* and Jain M. K. 2015. Seasonal Impacts studies of coal mining activities on surface water quality. *Indian Journal of Environmental Protection*. 35(12): 981-989. **(H Index =13)**.
56. Chandra A., Jain M. K. and **Kumar V***. 2015. Impacts of mine waste leachate on water quality in coal mining area with emphasis to heavy metals contamination. *Journal of Mines, Metals and Fuels*. 63(4): 104-108. **(H Index =7)**.
57. Hansda A., **Kumar V***. and Anshumali. 2015. Biosorption of Copper by Bacterial Adsorbents: A Review. *Research Journal of Environmental Toxicology*. 9(2): 45-58. DOI: 10:3923/rjet.2015.45.58. **(H Index =7)**.
58. Mritunjay S. K. and **Kumar V***. 2015. Fresh Produce Source of Pathogen: A Review. *Research Journal of Environmental Toxicology*. 9(2): 59-70. DOI: 10:3923/rjet.2015.59.70. **(H Index =7)**.
59. Sen S., **Kumar V***. and Sen P. 2014. Feasibility of *Cymbopogon citrates* (DC) Ex needs in revegetation of coal mine overburden dumps - A study. *Journal of Mines, Metals and Fuels*. 62(4): 96-104. **(H Index =7)**.



Dr. Vipin Kumar

Updated on Feb 2021.