CURRICULUM VITAE

Dr. Gyanendra Kumar

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Gender	:	Male
Language proficiency	:	English, Hindi
Nationality	:	Indian
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Career Objectives

Interested in working as a member of a motivated development team involved in challenging projects, where I can exercise my existing knowledge and skill set to the best and also gather new skills to reinforce my knowledge.

Teaching Experience

- From **03-November-2025** to till now working as Assistant Professor (Guest Faculty) at Department of Chemistry, Miranda house-110007, University of Delhi, Delhi.
- From **04-March-2024** to June 2024 working as Assistant Professor (Guest Faculty) at Deshbandhu College Kalkaji-110019, Delhi, University of Delhi, India.
- From **17-January-2021** to December 2023, working as Assistant Professor (Guest Faculty) at Swami Shraddhanand College-110036, Delhi, University of Delhi, India.

Honor's & Awards

- Qualified UGC-JRF June 2016 (AIR-91).
- Qualified CSIR-JRF December 2016.
- Qualified UGC-JRF December 2017.
- Qualified Gate 2015 (Gate score 180).
- Qualified Gate 2016 (Gate score 214).

Qualification Highlight

- **Inorganic Chemistry:** Specialization in Inorganic Chemistry, Chemical bonding, Atomic structure, Periodicity, Blocks of Chemistry (s, p, d, f), Lanthanide/Actinides, Coordination chemistry, Organometallic Chemistry, and Bioinorganic Chemistry.
- **Additionally, expertise in Organic Chemistry :** GOC, Aromaticity, Reaction Mechanism, Reagents, Name reactions, Stereochemistry, Pericyclic reactions, Photochemistry, Carbohydrate chemistry, Heterocyclic chemistry.
- UV-Spectroscopy and Fluorescence Spectroscopy.
- Familiar with FT-IR, NMR (^{1}H NMR and ^{13}C NMR) and Mass Spectroscopy.
- Expert in Column Chromatography and all Chemical Laboratory handling, pH meter, Conductometer, Calorimeter, Sonicator, Centrifuge, Lyophilizer, Drug Dissolution Apparatus, Shaker.
- Structural and Morphological techniques; XPS, TGA, FTIR, P-XRD, FE-SEM, HR-TEM, and EDX, CHNS.

Computer Skills

- One Year (A.D.C.A.) Advance Diploma in Computer Application from Lucknow.
- Molecular Docking
- Well knowledge of Chem-Draw, Chem-sketch, Origin, End-Note.
- MS Office (MS Word, MS Excel, MS Power Point), DOS (Disk Operating System)

Academic Profile

- **Thesis Title:** Synthesis of Metal Organic Frameworks and Graphene based nanocomposites for Drug delivery and Catalytic Applications.
- PhD Supervisor: **Prof. Dhanraj T. Masram**, Department of Chemistry, University of Delhi, India.
- Ph. D. in **Material Chemistry** from Department of Chemistry, University of Delhi, Delhi-110007, **awarded** in February **2022**.
- M. Sc. in Chemistry from the Department of Chemistry, Babasaheb Bhimrao Ambedkar University, Lucknow in **2013**.

- B. Sc. In Chemistry from Sri Jai Narayan P.G. College (KKC), Lucknow University in **2011**.
- Intermediate in PCB from SBV Intermediate College, Murar Mau Raebareli Uttar Pradesh in **2007**.
- High school in science group from SBV Intermediate College, Murar Mau Raebareli Uttar Pradesh in **2005**.

Research Interest

- Synthesis of Metal Organic Frameworks
- Synthesis of Graphene Oxide and its nanocomposites
- Synthesis of One pot organic reaction
- Applications in Drug Delivery, and Dye Degradation, and Catalysis
- Molecular Docking
- Characterization and lead out

Publications:-

1. **Gyanendra Kumar**, A. Kant, M. Kumar, and D. T. Masram, Synthesis, characterizations and kinetic study of metal-organic framework nanocomposite excipient used as extended-release delivery vehicle for an antibiotic drug, ***Inorg. Chim. Acta*****,** 496, **2019**, 119036. DOI: 10.1016/j.ica.2019.119036.

2. **Gyanendra Kumar**, N. K. Mogha, M. Kumar, Subodh, and D. T. Masram, NiO nanocomposites/rGO as heterogeneous catalysis for imidazole scaffolds with their applications in inhibiting DNA binding activity, ***Dalton Transactions***, 49, **2020**, 1963-1974. DOI: 10.1039/C9DT04416G.

3. **Gyanendra Kumar**, N. K. Mogha and D. T. Masram, Zr-based metal organic framework/Reduced graphene oxide composites for catalytic synthesis of 2,3-Dihydroquinazolin-4(1H)-one derivatives, ***ACS Appl. Nano Mater.,*** **2021**, 4, 3, 2682-2693, DOI: 10.1021/acsanm.0c03322.

4. **Gyanendra Kumar**, and D. T. Masram, Sustainable Synthesis of MOF-5@GO Nanocomposite for Efficient Removal of Rhodamine-B from Water, ***ACS Omega***, **2021**, 6, 14, 9587–9599, DOI:10.1021/acsomega.1c00143.

5. **Gyanendra Kumar**, K. Chaudhary, N. K. Mogha, A. Kant and D. T. Masram, Extended-release of metronidazole drug using chitosan/graphene oxide bio-nanocomposite beads as drug carrier, ***ACS Omega***, **2021**, DOI: 10.1021/acsomega.1c02422.

6. M. Kumar, **Gyanendra Kumar**, N. K. Mogha, R. Jain, F. Hussain, and D. T. Masram, Structure, DNA/proteins binding, docking and cytotoxicity studies of copper (II) complexes with the first quinolone drug nalidixic acid and 2,2′-dipyridylamine ***Spectrochim. Acta Part A Mol. Biomol. Spectrosc.,*** 212, **2018**, 94-104. DOI: 10.1016/J.SAA.045.

7. M. Kumar, **Gyanendra Kumar**, K. M. Dadure and D. T. Masram, Copper (II) complexes based on levofloxacin and 2N-donor ligands: synthesis, crystal structures and in vitro biological evaluation ***New Journal of Chemistry***, 43, 15462-15481, **2019**. DOI: 10.1039/c9nj03178b.

8. M. Kumar, N. K. Mogha, **Gyanendra Kumar**, F. Hussain, and D. T. Masram, Biological evaluation of copper (II) complex with nalidixic acid and 2,2'-bipyridine (bpy) ***Inorg. chim. Acta***. 490, **2019**, 144-154. DOI: 10.1016/j.ica.2019.03.011.

9. Subodh, N. K. Mogha, K. Chaudhary, **Gyanendra Kumar**, and D. T. Masram, Fur-Imine-Functionalized Graphene Oxide-Immobilized Copper Oxide Nanoparticle Catalyst for the Synthesis of Xanthene Derivatives ***ACS Omega 2018***, 3, 16377-1638. DOI: 10.1021/acsomega.8b01781.

10. M. Kumar, **Gyanendra Kumar**, and D. T. Masram, Copper (II) complexes containing Enoxacin and heterocyclic ligands: Synthesis, crystal structures, and their biological Perspectives, ***New J. Chem.,*** **2020**, 44, 8595-8613, Doi.org/10.1039/D0NJ01192D.

11. S. K. Yadav, A. R. S. Pratap, H. Meena, A. G. Goswami, Bhawna, V. Kumar, P. Jain, **Gyanendra Kumar**, D. K. Rana, I. Bahadur, P. Singh, An update on Graphene Oxide: Applications and toxicity, ***ACS Omega***, Review paper, **2022**, 7, 40, 35387–35445. doi.org/10.1021/acsomega.2c03171.

12. **Gyanendra Kumar**, A. Dutta, M. Goswami, B. Meena, S. Parasuboyina, R. Nongkhlaw and D. T. Masram, Synthesis of Zr-MOF/rGO-nanocomposite used for spirooxindole scaffolds, ***Journal of Molecular Structure,*** **2023,** 135653, DOI. NO. 10.1016/j.molstruc.2023.135653.

13. V. K. Vishvakarma, **Gyanendra Kumar**, S. Kumar, Bhawna, D. T. Masram, Effective Flame-Retardant Coatings for Expanded Polystyrene Foam: A Study Based on Deep Eutectic Solvent and Graphene Oxide, ***ACS Omega***, 10, **2025**, doi: 10.1021/acsomega.5c00242.

14. M. Athar, D. Kumar, **Gyanendra Kumar,** Methods And Techniques Employed For Sugar Decolorization, Publisher: *LAP Lambert Academic Publishing*, **2014**, **BOOK**, ISBN-13 : 978-3659517112, 1, 1-72.

15. M. Kumar, **Gyanendra Kumar**, A. Kant, and D. T. Masram, Role of Metallodrugs in Medicinal Inorganic Chemistry, (Book Chapter-3), ***Willy online library***, **2020**, 71-114, Online **ISBN: 9781119640868**. DOI: 10.1002/9781119640868.ch3.

16. **Gyanendra Kumar**, M. Ehtesham, and D. T. Masram, Implementation of Bionanocomposite for Drug Delivery System, (Book Chapter-4), **Springer, 2022**, **ISBN** 978-981-19-5337-8, **DOI** 10.1007/978-981-19-5338-5_4.

17. A. Kant, **Gyanendra Kumar,** M. Ehtesham, S. Ghosha, M. R. Singha and P. Gaijona, Application of Carbon-based Nano-composite materials for the Wastewater treatment, **ISBN:** 9781668445532, (Book Chapter 14), Pages: 335, ***IGI Global publisher*****, 2022,** DOI: 10.4018/978-1-6684-4553-2.

18. M. Ehtesham, N. Ansari, **Gyanendra Kumar,** S. Kumar, P. Gaijon, S. Ghosh, M. R. Singh, A. Kant, Detoxification of Industrial Wastewater by Catalytic (Photo/Bio/Nano) Techniques, **Sustainable Green Catalytic Processes**, M. Sen (Ed.)., **2023, ISBN:** 9781394212767, DOI: 10.1002/9781394212767.ch16.

19. **Gyanendra Kumar,** and D. T. Masram, Synthesis and Characterization of Carbon-based Ceramic Nanocomposites, Industrial Applications of Nanoceramics, Elsevier, Book Chapter, **ISBN:** 9780323886543, **2024,** 1-18, **DOI:** 1016/B978-0-323-88654-3.00001-9.

20. **Gyanendra Kumar,** N. Dhama, R. Yadav, D. T. Masram, Biocatalysis and Biobased Economy, **Sustainable Green Catalytic Processes**, **2024**, ISBN: 9781394212767, doi.org/10.1002/9781394212767.ch11.

21. **Gyanendra Kumar,** M. Ehtesham, S. Kumar, B. Meena, G. J. Rai, D. T. Masram, Metal–Organic Framework Sponges for Water Remediation, In: Gulati, S. (eds) Nanosponges for Environmental Remediation, **Springer**, Cham., **2024, DOI:**10.1007/978-3-031-41077-2_11.

22. **Gyanendra Kumar**, G. J. Rai, S. Gupta, N. Singh, V. K. Goel, D. T. Masram, Metal Organic Frameworks and Graphene based on Nano-composites in Catalytic Applications, ***Royal Society of Chemistry***, **2025, DOI:** 10.1039/9781837677191-00182.

23. B. Kumar Singh, P. Gaijon, R. Singh, **Gyanendra Kumar,** S. Ghosh, P J. Das, M. R. Singh, R. Dixit, J. Kumar, and A. Kant, Efficient Removal of Crystal Violet and Safranin-O Dyes Using Naturally Plant-Derived Azadirachta indica: A Combined Theoretical and Experimental Investigation., **2025**, ***ACS Omega***, **DOI**: 10.1021/acsomega.5c08889.

24. V. K. Vishvakarma, **Gyanendra Kumar,** Environmental Fate, Transport, and Health Hazards of Nanomaterials, *Exploring Nanotechnology for a Sustainable Economy,* **2025***,* DOI: 10.1201/9781003632498-8.

Oral/ Poster Presentation and Seminar

1. **Oral presentation** on "2nd National Conference on Emerging Trends and Future Challenges in Chemical Science (ETFC-2020), 10-11th January, **2020**, Department of Chemistry, Kirori Mal College, University of Delhi.
2. **Poster presentation** on "107 Indian Science Congress," January 3-7th, International Conference, **2020**, University of Agriculture Sciences, Bangalore.
3. **Poster presentation** on "Emerging Trends in Drugs Development and Natural-Products (ETDDNP-2018)" International conference, 12-14th January **2018**, Department of Chemistry, University of Delhi.
4. **Poster presentation** on "Frontiers at the Chemistry-Allied Sciences Interface (FCASI-2018)," 21-22th December **2018**, International Conference, University of Rajasthan, Jaipur.
5. **Participate** in the National workshop on "Nano Road Show-2020", held on 1st February **2020** at Miranda House, University of Delhi.
6. **Participate** in National conference on "Recent Advances in Chemical Science Towards Green & Sustainable Environment: Swachh Bharat Abhiyan Perspective, 10-11th October **2017**, Department of Chemistry, Aditi Mahavidyalaya, University of Delhi.
7. **Participate** in International seminar on "Effects of Pollution on human health", 1st December **2017**, Indian Academy of Biomedical Science (IABS), Department of Chemistry, University of Delhi.

8. **Online Participate** in National conference on "Application of mathematical tools in social sciences and sciences", 17-18th October **2020**, Organized by Zakir Husain Delhi College, University of Delhi.

9. **Online Participate** in International Webinar on "Drug Discovery-2021 (IWDD-2021)" held on 20th July **2021**, Organized by Atma Ram Sanatan Dharma College, University of Delhi.

References

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