Faculty Profile

Brief Profile

Dr. Raviraj Kusanur serves as a Professor in the Department of Chemistry at RV College of Engineering, Bengaluru, and brings with him a rich blend of academic excellence and industrial expertise. He obtained his Ph.D. in Chemistry from Karnatak University, Dharwad, and has over 13 years of teaching experience, complemented by 9.5 years in the pharmaceutical industry as a research scientist. His primary research interests include organic and materials chemistry, with additional focus on medicinal chemistry, nanomaterials, and conjugated polymer composites for sensor applications. Dr. Kusanur has an impressive publication record, authoring more than 80 articles in prestigious international journals, along with conference papers. He holds four granted and two published patents, underscoring his contributions to applied research and innovation. As an educator and research mentor, he has successfully guided students at undergraduate, postgraduate, and doctoral levels, and remains actively involved in academic committees and professional organizations.

Personal Information

- **Name:** Raviraj Kusanur
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Domain of Expertise

Research Focus

- **Primary Area:** Organic Chemistry, Materials Chemistry
- **Allied Areas:**
    - Medicinal Chemistry
    - Nano materials
    - Conjugated polymer composites

Academic Qualifications

- **Ph.D.**: Chemistry, Karnatak University Dharwad, 2004
- **M.Sc.** Organic Chemistry, Karnatak University Dharwad, 1999
- **B.Sc**.: Karnatak University Dharwad, 1997

Professional Experience

Experience

S.No	Institute/College/Industry	Job Title	Duration (From- To)
1.	Kumar Organics Private Limited, Bangalore	Scientist	Dec-2003 To Mar-2006
2.	Aurigene Discovery Technologies Private Limited, Bangalore	Scientist	Mar-2006 To Mar-2012
3	RV College of Engineering, Bangalore	Associate Professor	Apr-2012 To June-2015
5	RV College of Engineering, Bangalore	Associate Professor & HoD	June-2015 To Jan 2025
4	RV College of Engineering, Bangalore	Professor	Dec-2024-Till date

Publications & Patents

Journal Publications

1. Sharma, K., Koppal, V.V., **Raviraj Kusanur** and Deepa H K, Spectroscopic and Computational Analysis of 5PPD-CeO_2: Insights from Fluorescence Quenching and FRET Studies. *J Fluoresc* (2025). https://doi.org/10.1007/s10895-025-04383-y

2. H S Rashmi, K A Vishnumurthy, **Raviraj Kusanur**, High-performance hydrogen sulfide gas sensors based on π conjugated polymer nanocomposites, *Polymer Bulletin* (2025) https://doi.org/10.1007/s00289-025-05817-0
3. Pai, M. M, Yallur, B. C, Hadagali, M. D, Ahmed, E, Batakurki, S. R, **Kusanur, Raviraj**. Synthesis and biological activities of novel thieno[2,3-b]pyrrol-5-one derivatives: antioxidant and anticancer potential. Journal of Sulfur Chemistry, 2025, 1–17 (2025). https://doi.org/10.1080/17415993.2025.2463482
4. Jagadish H Patil, **Raviraj Kusanur**, Poornima G Hiremath, Amith H Gadagi, Prasad G Hegde, Umesh B Deshannavar, Enhanced fluoride removal by modified water hyacinth: response surface methodology and machine learning approach. Biomass Conversion and Biorefinary. (2025). https://doi.org/10.1007/s13399-025-06543-3
5. Dayanand N. Patagar, **Raviraj Kusanur**, Sheetal R. Batakurki, Maya Pai M, Vishnumurthy K. A, Swarna M. Patra, Aejaz A. Khan, Synthesis, evaluation of antioxidant and antidiabetic potential of 3-ethoxy carbonyl coumarin-8-propionamides, Journal of the Indian Chemical Society, 101(12), 101465. (2024) https://doi.org/10.1016/j.jics.2024.101465.
6. K.A. Vishnumurthy, **Raviraj Kusanur**, S. Kendaganna Swamy, Naked eye detection of anions: Dihydrazone receptor-based visual sensing, Journal of the Indian Chemical Society, 101(11), (2024), 101431, https://doi.org/10.1016/j.jics.2024.101431.
7. Shivaraj B. Radder, B. Siddlingeshwar, S.R. Manohara, Sudhir M. Hiremath, **Raviraj Kusanur**, S. Christopher Jeyaseelan. Experimental and theoretical investigation on vibrational, electronic, and docking characteristics of 1-(3-nitro-phenyl)-5-phenyl-penta-2,4-dien-1-one (1NP5PP). Canadian Journal of Physics. 102(12), 656-670 (2024). https://doi.org/10.1139/cjp-2024-0040
8. Dayanand N. Patagar, **Raviraj Kusanur**, Sheetal R. Batakurki, Maya Pai M, Vishnumurthy K. A, Swarna M. Patra, Aejaz A. Khan, Synthesis, evaluation of antioxidant and antidiabetic potential of 3-ethoxy carbonyl coumarin-8-propionamides, *Journal of the Indian Chemical Society, 101(12), 101465* (2024). https://doi.org/10.1016/j.jics.2024.101465
9. Sheetal R. Batakurki B. V. Nagesh, Jepangsur Aier, Basappa C. Yallur, Vinayak M. Adimule, Maya Pai, **Raviraj Kusanur**, Synthesis and Characterisation of Coumarin Analogues Using Palladium Catalyst and their Free Radical Scavenging Activity, Journal of Mines, Metals and Fuels, 2023, 71(12C), 513, https://doi.org/10.18311/jmmf/2023/47289
10. Maya Pai, Basappa Yallur, **Raviraj Kusanur**, Odiveedu Swetha, Archana R. Patil, Vinayak Adiumule, Sheetal R. Batakurki, Synthesis and Characterisation of Small Thiophene Analogues for Organic Photovoltaic Cell Applications, Journal of Mines, Metals and Fuels, 2023, 71(12C), 332, https://doi.org/10.18311/jmmf/2023/47254
11. Sheetal R. Batakurki Eliza Ahmed, Basappa C. Yallur, Archana R. Patil, Vinayak Adimule, **Raviraj Kusanur**, A Review on Synthesis and Biological Activities of Oxadiazole Derivatives, Journal of Mines, Metals and Fuels, 2023, 71(12C), 184. https://doi.org/10.18311/jmmf/2023/47290
12. Vijaya Kumar P. Bhavya, T. M. Mohan Kumar, **Raviraj Kusanur**, P. A. Dinesh, Quantum Chemical Computations, Photophysical Properties and Molecular Docking of Coumarin Derivative, Journal of Mines, Metals and Fuels, 2023, 71(12C), 494. https://doi.org/10.18311/jmmf/2023/47316

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17. Maya Pai, Eliza Ahmed, Sheetal Batakurki, S Girish Kumar, **Raviraj Kusanur**, Green synthesis of Palladium magnetic nanoparticles decorated on carbon nanospheres using Chenopodium and their application as heterogenous catalyst in the Suzuki-Miyaura coupling reaction, Applied Surface Science Advances, 16, 2023, 100427, https://doi.org/10.1016/j.apsadv.2023.100427
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41. Shivaraj B.Radder Raveendra Melavanki Sudhir M. Hiremath, **Raviraj.Kusanur**, Seema S.Khemalapure, S. Christopher Jeyaseelan,"Synthesis, spectroscopic (FT-IR, FT-Raman, NMR & UV-Vis), reactive (ELF, LOL, Fukui), drug likeness and molecular docking insights on novel 4-[3-(3-methoxy-phenyl)-3-oxo-propenyl]-benzonitrile by experimental and computational methods", Heliyon, 7(11),e08429, (2021)https://doi.org/10.1016/j.heliyon.2021.e08429.
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Conference Papers

1. N. M. Gayathri, Nidhi. P, Swaroop. K, V. Raghavan, **Raviraj. Kusanur**, J. H. Patil, Transforming Wastewater Management: The Evolution and Future of Compact STPs, *8th International Conference on Computational System and Information Technology for Sustainable Solutions (CSITSS)*, Bengaluru, India, 2024, 1-6, https://doi.org/10.1109/CSITSS64042.2024.10816935
2. P. Bhavya, Raveendra Melavanki, V. Revathi and **Raviraj Kusanur**, Linear SV Plot Ananlysis in Steady State and Transient State to Explore Fluorescence Quenching of Coumarin Derivative by Aniline Journal of Physics: Conference Series, 2426, 2023, https://doi.org/10.1088/17426596/2426/1/012013

Books/Book Chapters

1. Aarushi Das, Swarna M. Patra*, Glen Cletus DSouza, **Raviraj Kusanur**, Vijayakumar R.P, Book Title-Bioremediation for environmental sustainability, Chapter- Ecological Considerations in Microbial Bioremediation, Applied Academic Press (AAP) and CRC Press (Taylor and Francis Group).

Patents [Filed / Published / Granted]

1. **Hybrid Tricore Lead Compounds for Drug Discovery and Development, Raviraj Kusanur,** Vishnumurthy K A, Dayanand N Patagar, Indian Patent Application No: 202541057479, date: 16.06.2025 **(Filed)**
2. **Method and System for Preparing a Plasticizer from Rain Tree Pods, Ravindra R,** Raviraj Kusanur**,** *Indian Patent 201641019570 A, 2023* **(Granted).**

3. **Method for Synthesis of Poly (Oxydb-Codiacetodinitrile) Polymer Nanocomposite.** Raviraj Kusanur, Vishnumurthy K A, Rashmi S H, *Indian Patent Application No- 202341040378A*, 51/2024 Dated 20/12/2024 **(Published)**
4. **A Method for Synthesis of Polymer Nanocomposites For the detection of ethanol vapour in room temperature**. Vishnumurthy K A, Raviraj Kusanur, K G Swamy, Rashmi S H, Indian *Patent Application No- 202341084841*, date: 12.12.2023. **(Filed)**
5. **Dihydroorotate dehydrogenase Inhibitors,** WO/2010/115736, **(Granted)**
6. **DHODH Inhibitors,** IPCT/EP2010/054034, **(Granted)**
7. **DHODH Inhibitors,** US2012/0028959, **(Granted)**

Ongoing & Completed Research Projects

- **Synthesis and Characterization of Coumarin and Carbazole based small molecule organic light emitting diodes.** Finding Agency: Vision Group of Science and Technology. Duration: 2013-14, Role-PI

Professional Memberships

- Life member of The Indian Science Congress Association: **L409032**
- Life member of Indian Society for Technical Education: **LM 105900**

Awards & Recognitions

- Received Gold Medal for securing first rank in M.Sc. (Chemistry), Karnatak University Dharwad, 1999

Student Supervision

- **Ph.D. Candidates:** Guiding-2, Awarded-2
- **M.Tech/M.Sc. Students:** Guided- 12 students
- **Undergraduate Research Mentees:** 34

Professional Roles

- **Editorial and Reviewing Board**: Reviewer for the below journals. **Science direct Journals:** Journal of molecular structure, Heliyon, Journal of herbal medicine, Spectra chemical acta part A, Journal of Indian chemical society, Chemical data collection, Chemical Physics, Future Medicinal Chemistry, Journal of Saudi chemical society, Computational Biology and Chemistry, Arabian Journal of chemistry. **Wiley Journals:** Chemistry select, chemistry and biodiversity, **Springer Journals:** Medicinal Chemistry Research, Molecular Biotechnology, Topics in Catalysis. **Royal Society of Chemistry Journals:** RSC Advances.

- **Committee Member** 8th International Conference on Computational System and Information Technology for Sustainable Solutions (CSITSS)

Teaching

Core Courses: [Current semester]

- [CM221ID] Engineering and Environmental Chemistry

Advanced/Lab Courses:

- Engineering and Environmental Chemistry lab
- Chemistry of Functional Materials Lab

Professional Roles

Responsibilities

- **Academic:** Chief Time Table Officer
- **Administrative:** Member of Library committee,

External Connect

- BoS Member: (i) Dayanand Sagar College of Engineering, Bangalore (VTU Nominee), (ii) BMS College of Engineering Bangalore (iii) New Horizon College of Engineering, Bangalore (iv) Gogte Institute of Technology, Belagavi
- BoE Member: (i) BMS College of Engineering Bangalore, (ii) MS Ramaiah Institute of Technology, Bangalore, (iii) Dayanand Sagar College of Engineering, Bangalore, (iv) Gogte Institute of Technology, Belagavi.

National Journals	**National Conferences**	International Conferences	International Journals	Book Chapter published	Patents Granted
5	0	2	78	1	4