

BIO-DATA

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Prof. D.P. Rao is a member of the Royal Society of Chemistry (MRSC), London. He has completed twenty-three years of working in different capacities as a professor, associate professor, and assistant professor in these years. **He accomplished a sponsored trip to Shenzhen, China, in November 2011 and Athens, Greece, in July 2014 by UGC New Delhi, India.** He has completed 04 Research Projects along with 02 ongoing major research Projects, which have expeditious to the uplift of society in a well-defined manner. **He has 10 patents to his credit, of which 06 are UK and 04 are Indian.** At present, he is serving as **Editor-in-Chief** of GRS Journal of Multidisciplinary Research and Studies, International Research Journal of Scientific Reports and Reviews, and Journal of Medical Studies and Applied Sciences. He has been awarded as **Best Researcher by CSJM University, Kanpur, India** and an **Honorary D.Sc. degree from Central University of America.**

Web of Science ID : <https://www.webofscience.com/wos/author/record/HLX-7143-2023>
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Scopus ID : <http://www.scopus.com/authid/detail.url?authorId=35119371500>
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CAREER

From	To	Post	Institute
01/11/2021	Till date	Professor	D.A-V. (P.G.) College, Kanpur, U.P.
17/03/2018	30/10/2021	Associate Professor	D.A-V. (P.G.) College, Kanpur, U.P.
21/07/2006	16/03/2018	Assistant Professor	D.A-V. (P.G.) College, Kanpur, U.P.
17/03/2006	20/07/2006	Assistant Professor	S.H.K. P.G. College, Basti, U.P.
20/03/2003	16/03/2006	Lecturer	Govt. J. Inter College, Gorakhpur U.P.
1999	1999	Project Associate	N.P.L. New Delhi

LIST OF PUBLICATIONS

1	Therapeutic studies of the dioxomolybdenum (VI) compounds of Schiff base Siddharam, Nidhi, K. Gautam, D.P. Rao* <i>Oriental Journal of Chemistry</i> , ISSN: 22315039, 41(6), 1979-1990, 2025, IF 0.6 Indexing: ESCI DOI: http://dx.doi.org/10.13005/ojc/410612
2	Rapid synthesis of pyrimidine derivatives using a reproducible catalyst based on triflate anion E.A.M. Saleh, M.M. Moharam, F.F. Seed, R. Roopashree, S. Ray, K. Jaybalan, R. Sharma, A. Sinha, I.B. Sapaev, D.P. Rao* <i>Chemical Papers</i> , ISSN: 25857290, -----, 2025, IF 2.5 Indexing: SCIE, Scopus Q2 DOI: https://doi.org/10.1007/s11696-025-04516-4
3	Thiophenyl azanylidene pentadamine molybdenum compounds and their antibacterial effects Siddharam, Nidhi, K. Gautam, D.P. Rao*

	<i>Letters in Applied NanoBioScience</i> , ISSN: 22846808, 14(4), 248, 2025, Scopus Q3 DOI: https://doi.org/10.33263/LIANBS144.248
4	Exploring advancements and emerging trends in nanozyme engineering to enhance dual-mode analysis of bacterial pathogens: A comprehensive review F.M.A. Altalbawy, C.-Yi Hsu, M.Y.H. Al-Shamri, Z.K.A. Al-Khafaji, A.K. Kareem, S. Shomurotova, D.P. Rao* , Y.F. Mustafa, W. Nabil, Z. I. Al-Mashhadani <i>Talanta</i> , ISSN: 1873-3573, 298(2026), 129042, 2025 IF 6.1 Indexing: SCIE Q1 DOI: https://doi.org/10.1016/j.talanta.2025.129042
5	Carbon cone-shaped anodes for sodium and potassium-ion batteries: a theoretical study C.Y. Hsu, A.B.M. Ali, V. Jain, A.M.A. Mohamed, D.P. Rao*, S. Shomurotova, M.H. Najm, Z.S.A. Madhi, H.M. Alkahtani <i>Journal of Energy Storage</i> , ISSN: 2352-1538, ----- 119301, 2025 IF 9.8 Indexing: SCIE Q1 DOI: https://doi.org/10.1016/j.est.2025.119301
6	A computer-based study on the potential flutamide drug biosensor based on transition metal modified BN nanocage O.A. Khadhair, A.Y. Ahmed, G. P. Priya, S. Ray, A. Pal, V. Arora, O. Mukhitdinov, L. Safarova, D.P. Rao* , A. Smerat, S.O. Rab <i>Microchemical Journal</i> , ISSN: 1095-9149, 219 (2025) 115823, 2025 IF 5.1 Indexing: SCIE Q1 DOI: https://doi.org/10.1016/j.microc.2025.115823 Web of Science, Scopus (Elsevier)
7	Dinitrogen fixation by Cyanobacteria V. Gupta, K. Kumar, V.K. Dubey, D.P. Rao , P. Gupta, A. Kushwaha, S.K. Singh, P. Mishra, V. Saxena, G.P. Gupta <i>International Journal of Environmental Sciences</i> , ISSN: 2229-7359, 11(22), 633-652, 2025, Q3 DOI: https://theaspd.com/index.php
8	Electrodeposition of stacked CFZN metallic oxide nanosheets as high-performance bifunctional electrocatalyst for HER and supercapacitor C. Hsu, K.H. Thamir, Z.A. Rejab, H.A. Abbood, A. Ved, S. Saydaxmetova, U. Raheja, A.M.A. Mohamed, H.M. Alkahtani, D.P. Rao* <i>Journal of the Taiwan Institute of Chemical Engineers</i> , ISSN: 1876-1070, 176(2025), 106299, 2025, IF 6.3 , Indexing: SCIE, Q1 DOI: https://doi.org/10.1016/j.jtice.2025.106299 Web of Science, Scopus (Elsevier)
9	An antibacterial agent based on diamine conjugated thenil Schiff base: Synthesis, crystal structure, and activity studies Nidhi, Siddharam, D.P. Rao* , A.K. Gautam, A. Verma, Y. Gautam, S. Singh, C.P. Singh, A.K. Srivastava, S.G. Prasad <i>Discover Applied Sciences</i> , ISSN: 3004-9261, 7, 634, 2025, IF 2.8 , Indexing: ESCI, Q2 DOI: https://doi.org/10.1007/s42452-025-06744-5 Web of Science, Scopus (Elsevier)
10	Synthesis, Crystallographic, Spectroscopic, Quantum Chemical Studies and Anticancer Activity of Novel Pyrazoline Derivative H. Khanam, S. Parveen, A.K. Gautam, Akshay, A.K. Gupta, M. Banerjee, J. Pandey, M. Singh, D.P. Rao , R.K. Maurya ^{e f} , A.K. Gautam, H.K. Maurya, Y. Gautam <i>Journal of Molecular Structure</i> , ISSN 0022-2860, 1342(2025), 142742, 2025, IF: 4.7 , Indexing: SCIE, Q1 DOI: https://doi.org/10.1016/j.molstruc.2025.142742 Web of Science, Scopus (Elsevier)
11	Discovery of a novel 4-Pyridyl SLC-0111 Analog Targeting Tumor-Associated Carbonic Anhydrase Isoform IX Through Tail-Based Design Approach with Potent Anticancer Activity H. Hashem, S. Abdelfattah, H. Hassan, A. Al-Eman, M. Alqarni, G. Alotaibi, I.T. Radwan, K. Kaur, D.P. Rao* , S. Brase, A. Alkhamash <i>Frontiers in Chemistry</i> , ISSN: 2296-2646, 13, 1571646, 2025, IF 4.2 , Indexing: SCIE, Q1 DOI: https://doi.org/10.3389/fchem.2025.1571646 Web of Science, Scopus (Elsevier)
12	Reaction mechanism chemistry of chain scission, crosslinking, and other product formation in γ -ray irradiated PET polymer using molecular spectroscopy S.G. Prasad, C. Lal, K.C. Verma, D.P. Rao <i>Chemistry Africa</i> , ISSN: 25225758, 8, 2409-2420, 2025, IF 2.6 , Indexing: ESCI, Q2 DOI: https://doi.org/10.1007/s42250-025-01253-9 Web of Science, Scopus (Elsevier)
13	The ability of ZnO and MgO nanocages for adsorption and sensing performance of anticancer drug detection. M.J. Saadh, A.B.M. Ali, Z.A. Hanoon, V. Jain, P.K. Pathak, A. Kumar, A.A. Almehizia, D.P. Rao* <i>Journal of Molecular Graphics and Modelling</i> , ISSN: 18734243, 137(2005), 109003, 2025 IF 3.0 Indexing: ESCI, Q2 DOI: https://doi.org/10.1016/j.jmngm.2025.109003

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14	Coordination engineering of transition metal doped in B2CN3 electrocatalyst to enhance efficient carbon dioxide reduction reaction W.H. Hassan, A. Kumar, G.V.S. Prasad, B. Juneja, M.S. Merza, A.A. Almehezia, D.P. Rao* , Chou-Yi Hsuh <i>Sustainable Chemistry and Pharmacy</i> , ISSN 2352-5541, 44(2025), 101951, 2025, IF: 5.8 , Indexing: SCIE, Q1 DOI: https://doi.org/10.1016/j.scp.2025.101951 Web of Science, Scopus (Elsevier)
15	An insight into the therapeutic impact of quinoxaline derivatives: Recent advances in biological activities (2020–2024) Aly M. Waseem, R.M. Elmagzoub, M.M.M. Abdelgadir, A.A. Bahir, N.S. Abd EL-Gawaad, A.S. Abdel-Samea, D.P. Rao* , K. Kossenias, S. Brase, H. Hashem <i>Results in Chemistry</i> , ISSN 2211-7156, 13(2025), 101989, 2024, IF: 4.2 , Indexing: ESCI, Q2 DOI: https://doi.org/10.1016/j.rechem.2024.101989 Web of Science, Scopus (Elsevier)
16	Schiff bases and their possible therapeutic applications: A review Nidhi, Siddharam, D.P. Rao* , A.K. Gautam, A. Verma, Y. Gautam <i>Results in Chemistry</i> , ISSN 2211-7156, 13(2025), 101941, 2024, IF: 4.2 , Indexing: ESCI, Q2 DOI: https://doi.org/10.1016/j.rechem.2024.101941 Web of Science, Scopus (Elsevier)
17	In-situ engineering of 3D amorphous/crystalline NiFeP/NiMoP/NF composite for improved hydrogen evolution. B. Meia, Ali B.M. Ali, M. Al-Yasiri, A. Kumar, P. Sharma, M. Chahar, M. Ravi Kumar, S. Islam, D.P. Rao* , S.M. Irshad <i>International Journal of Hydrogen Energy</i> , ISSN 0360-3199, 97(2025), 130-139, 2024, IF: 8.3 , Indexing: SCIE, Q1 DOI: https://doi.org/10.1016/j.ijhydene.2024.11.425 Web of Science, Scopus (Elsevier)
18	1,4-Bis(pyridin-1-ium)benzene trifluoroacetate coordinated to chloropropyl functionalized SiO ₂ -nano-NiFe ₂ O ₄ (BPBTCSF): as a novel and effectual mesoporous bi-functional magnetic catalyst for the synthesis pyrido[2,3-d:6,5-d']dipyrimidines. C.Y. Hsu, M.Y. Alshahrani, Y. Jadeja, E.F. Oghenemaro, D. Nathiya, P. Kaur, D. Aulakh, D.P. Rao , A.M.H. Wais, F.A. alzahra <i>Journal of Molecular Structure</i> , ISSN 0022-2860, 1323(2025), 140671, 2024, IF: 4.7 , Indexing: SCIE, Q1 DOI: https://doi.org/10.1016/j.molstruc.2024.140671 Web of Science, Scopus (Elsevier)
19	In-silico designing and synthesis of small molecule potential inhibitors of Plasmodium falciparum plasmepsin I based on HEA and Piperazine moieties. A.K. Gautam, R. Boyina, A. Verma, S.G. Prasad, Y. Gautam, D.P. Rao* <i>Oriental Journal of Chemistry</i> , ISSN: 22315039, 40(5), 1460-1469, 2024 IF 0.8 Indexing: SCIE DOI: http://dx.doi.org/10.13005/ojc/400529 Web of Science, Scopus (Elsevier)
20	Antibacterial effects of Mo(VI) macrocyclic compounds. S. Katiyar, Siddharam, D.P. Rao* , S.G. Prasad <i>Oriental Journal of Chemistry</i> , ISSN: 22315039, 40(5), 1356-1366, 2024 IF 0.8 Indexing: SCIE DOI: http://dx.doi.org/10.13005/ojc/400518 Web of Science, Scopus (Elsevier)
21	Indole Derivatives: A versatile scaffold in modern drug discovery- An updated review on their multifaceted therapeutic applications (2020–2024) Xingyou Mo, D.P. Rao , K. Kaur, R. Hassan, A.S. Abdel-Samea, S.M. Farhan, S. Bräse, H. Hashem <i>Molecules</i> , ISSN: 1420-3049, 29, 4770, 2024 IF: 4.6 , Indexing: SCIE, Q1 DOI: https://doi.org/10.3390/molecules29194770 Web of Science, Scopus (Elsevier)
22	An Efficient and Green Strategy for the Synthesis of Graphene with Aqueous Polyphenol Extracts of Orchid Flower (Dendrobium Anosmum) for Charge Storage. I. Ruti, V. Kaliyaperuma, D. P. Rao , S. Kumar <i>Materials Letters</i> , ISSN: 0167-577X, 376, 137131, 2024 IF 2.7 , Indexing: SCIE, Q1 DOI: https://doi.org/10.1016/j.matlet.2024.137131 Web of Science, Scopus (Elsevier)
23	Saffron: A Comprehensive Review of It's Cancer-Preventive and Curative Properties in Different Types of Cancer Y. Gautam, M. Srivastav, P. Mishra, M. Singh, H. Kausar, D. P. Rao , A. Srivastav, L. Kumari, R.P.S. Chauhan, N. Verma <i>Oriental Journal of Chemistry</i> , ISSN: 22315039, 40(3), 646-659, 2024 IF 0.8 Indexing: SCIE DOI: http://dx.doi.org/10.13005/ojc/400303 Web of Science, Scopus (Elsevier)

24	<p>Adsorptive removal of cadmium electroplating wastewater using hybrid composite of thiol-grafted seed gum of Tamarindus indica and Teff hay biocarbon.</p> <p>D. P. Rao, V.D. Krishnasamy, M. Selvaraju*, V.P. Sundramurthy, S.R. Kandavalli, M.S. Chitra, N. Sivasamy, P. Thirumoorthy <i>Zeitschrift für Physikalische Chemie</i>, (International Journal of Research in Physical Chemistry and Chemical Physics), ISSN: 2196-7156, 239 (5), 633-654, 2025 IF 3.2, Indexing: SCIE, Q2 DOI: https://doi.org/10.1515/zpch-2024-0715 Web of Science, Scopus (Elsevier)</p>
25	<p>Correlation coefficient for physico-chemical parameters to assess the quality of tannery effluents at Kanpur.</p> <p>R. Saxena, D.P. Rao*, A.K. Gautam, M. Gautam, G.P. Gupta, S. Kumar, V. Saxena, C.P. Singh, V. Shankar, Y. Gautam <i>Letters in Applied NanoBioScience</i>, ISSN: 22846808, 13(1), 47, 1-12, 2024 DOI: https://doi.org/10.33263/LIANBS131.047 Scopus (Elsevier)</p>
26	<p>A review in curcuminoids: Chemistry, anticancer activity and future prospects</p> <p>P. Mishra, M. Srivastava, Y. Gautam, M. Singh, N. Verma, D. S. Kapkoti, S. P. Singh, A. K. Singh, D. P. Rao <i>Indian Drugs</i>, ISSN: 0019-462X, 61(5), 7-23, 2024 DOI: https://doi.org/10.53879/id.61.05.14041 Scopus (Elsevier)</p>
27	<p>Pure and doped graphene as a suitable material for the detection of hazardous gases.</p> <p>R. Zainul, A. T. Ahmed, M. Kaur, R. Sharma, L. H. Saleh, A.A. Mahmood, D. P. Rao*, M. A. Hasan, S. Islam <i>Journal of Organometallic Chemistry</i>, ISSN: 0022-328X, 1014, 123196, 2024, IF 2.4, Indexing: SCIE, Q2 DOI: https://doi.org/10.1016/j.jorganchem.2024.123196 Web of Science, Scopus (Elsevier)</p>
28	<p>Dioxomolybdenum (VI) compounds of macrocyclic Schiff base ligands: Preparation, characterization and antibacterial activity.</p> <p>S. Katiyar, D. P. Rao*, N. K. Verma, A. K. Gautam, A. Verma, C. P. Singh, Y. Gautam <i>Oriental Journal of Chemistry</i>, ISSN: 2231-5039, 40(1), 28-39, 2024 IF 0.8 Indexing: SCIE DOI: http://dx.doi.org/10.13005/ojc/400104 Web of Science, Scopus (Elsevier)</p>
29	<p>Physico-chemical analyses to assess the quality of distillery effluents at Unnao.</p> <p>R. Saxena, D.P. Rao*, A.K. Gautam, M. Gautam, G.P. Gupta, S. Kumar, V. Saxena, C.P. Singh, V. Shankar, Y. Gautam <i>Biointerface Research in Applied Chemistry</i>, ISSN: 20695837, 14(2), 38, 1-12, 2024 DOI: https://doi.org/10.33263/BRIAC142.038 Web of Science, Scopus (Elsevier)</p>
30	<p>Aniline-naphthylamine copolymer integrated with aluminum terephthalate-based metal organic framework for efficient hydrogen evolution from seawater.</p> <p>Y. Jazaa, R. Abdulkareem, L.M.F. Fiallos, S.K. Saraswat, S. Abdullaev, R.M.T. Castillo, D.P. Rao, Z.H. Mahmoud, A.A. Rajhi <i>Journal of Materials Engineering and Performance</i>, ISSN 1059-9495, 34, 960-967, 2025 IF 2.3 Indexing: SCIE, Q2 DOI: https://doi.org/10.1007/s11665-024-09175-2 Web of Science, Scopus (Elsevier)</p>
31	<p>Synthesis and Crystal Structure-Activity Studies and Possible Therapeutic Application of Diamine Conjugated Fural Schiff Base as Antibacterial Agent.</p> <p>S. Katiyar, D.P. Rao*, N.K. Verma, A.K. Gautam, C.P. Singh, A. Verma, G.P. Gupta <i>Chemistry Africa</i>, ISSN: 25225758, 7(4), 1817-1828, 2024 IF 2.6 Indexing: ESCI, Q2 DOI: https://doi.org/10.1007/s42250-023-00868-0 Web of Science, Scopus (Elsevier)</p>
32	<p>Interaction of procarbazine drug and solvent effects on pristine and embedded-zinc oxide nanotube as a drug delivery vehicle: A DFT investigation.</p> <p>M.J. Saadh, R. Abdulkareem, O.Q.B. Allela, A. Kumar, A.H. Shather, D.P. Rao*, L.P. Castelo, A.A. Omran, A. Elawady <i>Physica B: Condensed Matter</i>, ISSN: 09214526, 676, 415658, 2024, IF 2.8 Indexing: SCIE, Q2 DOI: https://doi.org/10.1016/j.physb.2023.415658 Web of Science, Scopus (Elsevier)</p>
33	<p>Evaluating ammonia sensors based on two-dimensional pure and silicon decorated biphenylene using DFT calculations.</p> <p>M.J. Saadh, S.A. Jasim, M.G. Veloz, A. Kumar, S.M. Mekkey, M.A. Guadalupe, M. Nora, D.P. Rao*, Y. Elmasry <i>Inorganic Chemistry Communications</i>, ISSN 1387-7003, 160, 111918, 2024 IF 5.4 Indexing: SCIE, Q1 DOI: https://doi.org/10.1016/j.inoche.2023.111918 Web of Science, Scopus (Elsevier)</p>
34	<p>Thermolysis and their kinetics of Cu(II) perchlorate complex with isopropylamine and water.</p> <p>A. Sing, C.P. Singh, A.K. Srivastava, D.P. Rao*</p>

	<p><i>European Chemical Bulletin</i>, ISSN: 20635346, 12(sp. 13), 1166-1173, 2023 DOI: https://www.eurchembull.com/uploads/paper/c2abfa0c31c9ebcacb8d98f455e40833.pdf Scopus (Elsevier)</p>
35	<p>Progressing nanotechnology to improve targeted cancer treatment: overcoming hurdles in its clinical implementation. M. Chehelgerdi, M. Chehelgerdi, O.Q.B. Allela, R.D.C. Pecho, N. Jayasankar, D.P. Rao, T. Thamaraiyani, M. Vasanthan, P. Viktor, N. Lakshmaiyya, M.J. Saadh, A. Amajd, M.A. Abo-Zaid, R.Y. Castillo-Acobo, A.H. Ismail, Ali H. Amin, R. Akhavan-Sigari <i>Molecular Cancer</i>, ISSN 1476-4598, 22(169), 2023 IF 37.3 Indexing: SCIE, Q1 DOI: https://doi.org/10.1186/s12943-023-01865-0 Web of Science, Scopus (Elsevier)</p>
36	<p>Design and evaluation of the chemical functionalized BxCyNz (x=z=1, y=2) nanotube as an anticancer drug delivery vehicle. M.J. Saadh, H.A. Mohammad, R.S. Alazragi, S.F. Jawad, A.H. Shather, D.P. Rao, A.J.A. Saheb, S. Sharma, Z.T. Abed <i>Inorganic Chemistry Communications</i>, ISSN 1387-7003, 157, 111321, 2023 IF 5.4 Indexing: SCIE, Q1 DOI: https://doi.org/10.1016/j.inoche.2023.111321 Web of Science, Scopus (Elsevier)</p>
37	<p>Half-sandwich arene metal complexes bearing ferrocenyl-pyridine azine Schiff Base: Anticancer, antibacterial, DNA binding and in vitro cytotoxicity studies. Sheetal, D.P. Rao*, Vikky Singh, Sarita Srivastava, Sanjay Kumar, Ranvir Singh <i>Chemistry Africa</i>, ISSN: 25225758, 6(6), 2983-2993, 2023 IF 2.6 Indexing: ESCI, Q2 DOI: https://doi.org/10.1007/s42250-023-00706-3 Web of Science, Scopus (Elsevier)</p>
38	<p>Synthesis of mesoionic 1-aryl-4-(phenyl/p-chlorophenyl)imidazo[2,1-b]thiazol-4-ones and study of their monoamine oxidase, succinate dehydrogenase inhibitory, anti-convulsant and anti-bacterial activity. S.K. Srivastava, D.P. Rao*, S.P. Singh <i>Letters in Applied NanoBioScience</i>, ISSN: 22846808, 12(3), 90, 2022 DOI: https://doi.org/10.33263/LIANBS123.090 Scopus (Elsevier)</p>
39	<p>Central Nervous System Activity of 1-aryl-2-(thiomethylene benzimidazol-2-yl)-4-(phenyl/p-chlorophenyl)-imidazoles and 1-aryl-2-sulphono-[benzimidazol-2-yl]-methyl-4-(phenyl/p-chlorophenyl)-imidazoles. S.K. Srivastava, S.P. Singh, D.P. Rao* <i>Letters in Applied NanoBioScience</i>, ISSN: 22846808, 12(3), 73, 2022 DOI: https://doi.org/10.33263/LIANBS123.073 Scopus (Elsevier)</p>
40	<p>Synthesis, crystal structure and kinetics of thermolysis of cobalt perchlorate complex with hexamethylenetetramine. C.P. Singh, A. Singh, C.G. Daniliuc, B. Kumar, G. Singh, D.P. Rao* <i>Indian Journal of Chemistry A</i>, ISSN: 03764710, 60A, 676-681, 2021, IF 0.412 Indexing: SCIE DOI: https://doi.org/10.56042/ijca.v60i5.40587 Web of Science, Scopus (Elsevier)</p>
41	<p>Cis-Dioxomolybdenum (VI) complexes with N-donor macrocyclic ligands. R.K. Gautam, C.P. Singh, D.P. Rao* <i>Biointerface Research in Applied Chemistry</i>, ISSN: 20695837, 12(1), 1352-1364, 2022 DOI: https://doi.org/10.33263/BRIAC121.13521364 Web of Science, Scopus (Elsevier)</p>
42	<p>Synthesis, crystal structure and thermolysis of cadmium perchlorate complex with hexamethylenetetramine. C.P. Singh, A. Singh, Nibha, C.G. Daniliuc, G. Singh, D.P. Rao* <i>Biointerface Research in Applied Chemistry</i>, ISSN: 20695837, 11(3), 10895-10905, 2021 DOI: https://doi.org/10.33263/BRIAC113.1089510905 Web of Science, Scopus (Elsevier)</p>
43	<p>Molybdenum(VI) complexes with Schiff base containing N-hetero atom. C.P. Singh, H.S. Yadav, D.P. Rao* <i>Letters in Applied NanoBioScience</i>, ISSN: 22846808, 10(1), 1816-1824, 2021 DOI: https://doi.org/10.33263/LIANBS101.18161824 Scopus (Elsevier)</p>
44	<p>Synthesis and studies of some cis-MoO₂(VI) complexes with nitrogen donor macrocyclic ligands. R.K. Gautam, C.P. Singh, R. Saxena, D.P. Rao* <i>European Chemical Bulletin</i>, ISSN: 20635346, 8(12), 387-393, 2019</p>

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46	New insights into the chemistry of cis-dioxomolybdenum(VI) Schiff base complexes with macrocyclic ligands. R.K. Gautam, C.P. Singh, D. Kumar, D.P. Rao* <i>Chemical Science Transactions</i> , ISSN: 22783458, 8(4), 467-476, 2019 DOI: https://doi.org/10.7598/cst2019.1594
47	Synthesis and antibacterial activity of novel molybdenum complexes with macrocyclic Schiff base derived from furanylethanedione. R.K. Gautam, C.P. Singh, R. Saxena, D.P. Rao* <i>Asian Journal of Chemistry</i> , ISSN: 09707077, 31(11), 2607-2612, 2019, Q4 DOI: https://doi.org/10.14233/ajchem.2019.22242 Scopus (Elsevier)
48	Thermal decomposition and their kinetics of mercury(II) perchlorate complex with 4-aminopyridine and water. C.P. Singh, A. Singh, D.P. Rao* <i>Letters in Applied NanoBioScience</i> , ISSN: 22846808, 8(3), 649-653, 2019 DOI: https://doi.org/10.33263/LIANBS83.649653 Scopus (Elsevier)
49	New Insights into the Chemistry of oxovanadium(IV) Schiff base complexes with nitrogen donor. A.K. Yadava, H.S. Yadav, D.P. Rao* <i>Journal of Science</i> , ISSN: 22773290, 5(11), 1086-1090, 2015
50	Synthesis and spectral studies of oxovanadium(IV) Schiff base complexes derived from 1,1'-oxalyldiimidazole and aromatic amines. A.K. Yadava, H.S. Yadav, R. Saxena, D.P. Rao* <i>European Chemical Bulletin</i> , ISSN: 20635346, 4 (7), 356-359, 2015 DOI: https://doi.org/10.17628/ECB.2015.4.356 Scopus (Elsevier)
51	Synthesis, characterization and antibacterial evaluation of five MoO ₂ (VI) complexes coordinated by Schiff derivatives. D.P. Rao <i>Biointerface Research in Applied Chemistry</i> , ISSN: 20695837, 4 (4), 793-797, 2014 https://publons.com/wos-op/publon/56118938/ Web of Science, Scopus (Elsevier)
52	Enhancement of seed germination and plant growth of wheat, maize, peanut and garlic using multiwalled carbon nanotubes. D.P. Rao* , A. Srivastava <i>European Chemical Bulletin</i> , ISSN: 20635346, 3(5), 502-504, 2014 DOI: https://doi.org/10.17628/ECB.2014.3.502 Scopus (Elsevier)
53	cis-Dioxomolybdenum(VI) complexes with symmetrical tetradentate Schiff bases and their antibacterial activity. D.P. Rao* , H.S. Yadav, A. Srivastava <i>Biointerface Research in Applied Chemistry</i> , ISSN: 20695837, 4(1), 678-684, 2014 https://publons.com/wos-op/publon/56118929/ Web of Science, Scopus (Elsevier)
54	New insights into the chemistry of dioxomolybdenum(VI) complexes with Schiff base. D.P. Rao <i>Biointerface Research in Applied Chemistry</i> , ISSN: 20695837, 4(1), 671-677, 2014 https://publons.com/wos-op/publon/56118930/ Web of Science, Scopus (Elsevier)
55	Physico-Chemical analysis and pollution level of one of the distillery effluents in-Unnao, India. A.P. Singh, R. Saxena, D.P. Rao* <i>European Chemical Bulletin</i> , ISSN: 20635346, 2(12), 1060-1064, 2013 DOI: https://eurchembull.com/uploads/paper/39752895117f3ae39949f75a17c7704d.pdf Scopus (Elsevier)

56	<p>New insights into the chemistry of <i>cis</i>-dioxomolybdenum (VI) complexes with symmetrical tetradentate Schiff bases and their antibacterial activity. D.P. Rao <i>Biointerface Research in Applied Chemistry</i>, ISSN: 20695837, 3(4), 606-612, 2013 https://publons.com/wos-op/publon/56118934/ Web of Science, Scopus (Elsevier)</p>
57	<p><i>In-situ</i> synthesis and antibacterial activity of novel macrocyclic complexes of <i>cis</i>-dioxomolybdenum(VI). D.P. Rao*, H.S. Yadav <i>Biointerface Research in Applied Chemistry</i>, ISSN: 20695837, 3(2), 533-540, 2013 https://publons.com/wos-op/publon/56118932/ Web of Science, Scopus (Elsevier)</p>
58	<p>Assessment of tannery effluent: a case study of Kanpur in India. A.P. Singh, D.P. Rao* <i>European Chemical Bulletin</i>, ISSN: 20635346, 2 (7), 461-464, 2013 DOI: https://doi.org/10.17628/ECB.2013.2.461 Scopus (Elsevier)</p>
59	<p>Synthesis and spectral characterization of some novel macrocyclic complexes of oxovanadium(IV) with 1,1'-oxalyldiimidazole. A.K. Yadava, H.S. Yadav, D.P. Rao* <i>European Chemical Bulletin</i>, ISSN: 20635346, 2(5), 255-258, 2013 DOI: https://doi.org/10.17628/ECB.2013.2.255 Scopus (Elsevier)</p>
60	<p>New insights into the chemistry of oxovanadium(IV) complexes with tetradentate macrocyclic ligands. S. Singh, H.S. Yadav, A.K. Yadava, D.P. Rao* <i>Biointerface Research in Applied Chemistry</i>, ISSN: 20695837, 3 (1), 484-490, 2013 https://publons.com/wos-op/publon/56118935/ Web of Science, Scopus (Elsevier)</p>
61	<p>Synthesis, structure and characterization of oxovanadium(IV) Schiff base complexes with tetradentate macrocyclic ligands. A.K. Yadava, H.S. Yadav, U.S. Yadava, D.P. Rao* <i>Biointerface Research in Applied Chemistry</i>, ISSN: 20695837, 2(5), 424-431, 2012 Web of Science, Scopus (Elsevier)</p>
62	<p>New insights into the chemistry of oxovanadium(IV) complexes with N₄ coordinating ligands. A.K. Yadava, H.S. Yadav, U. S. Yadava, D.P. Rao* <i>ISRN Inorganic Chemistry</i>, ISSN: 2314470X, ID 871640, 5 Pages, 2013 DOI: https://doi.org/10.1155/2013/871640</p>
63	<p>Synthesis of oxovanadium(IV) complexes with tetraaza coordinating ligands. S. Singh, H.S. Yadav, A.K. Yadava, D.P. Rao* <i>Journal of Chemistry</i>, ISSN: 20909071, ID 947325, 5 Pages, 2013, IF 3.241 Indexing: SCIE, Q2 DOI: http://dx.doi.org/10.1155/2013/947325 Web of Science, Scopus (Elsevier)</p>
64	<p>Synthesis and characterization of <i>cis</i>-dioxomolybdenum(VI) complexes having furil as precursor molecule. D.P. Rao*, H.S. Yadav, A.K. Yadava, S. Singh, U.S. Yadav <i>Journal of the Serbian Chemical Society</i>, ISSN: 03525139, 77 (9), 1-10, 2012, IF 1.100 Indexing: SCIE, Q3 DOI: https://doi.org/10.2298/JSC111110020R Web of Science, Scopus (Elsevier)</p>
65	<p>Synthesis and characterization of some novel Schiff base complexes of oxovanadium(IV) cation. A.K. Yadava, H.S. Yadav, U.S. Yadav, D.P. Rao* <i>Journal of Chemistry</i>, ISSN: 20909071, ID 689518, 5 Pages, 2013, IF 3.241 Indexing: SCIE, Q2 DOI: http://dx.doi.org/10.1155/2013/689518 Web of Science, Scopus (Elsevier)</p>
66	<p>Synthesis and structural characterization of novel square pyramidal oxovanadium(IV) complexes with ligands having N and O- donor atoms. A.K. Yadava, H.S. Yadav, U.S. Yadav, D.P. Rao*</p>

	<p><i>Turkish Journal of Chemistry</i>, ISSN: 13000527, 36 (4), 624-630, 2012, IF 1.4 Indexing: SCIE, Q3 DOI: https://doi.org/10.3906/kim-1201-54 Web of Science, Scopus (Elsevier)</p>
67	<p>Synthesis and characterization of oxovanadium(IV) macrocyclic complexes with ligands derived by condensation of furil with 1,4-diaminobenzene or 3,4-diaminopyridine and their reactions with β-diketones. S. Singh, H.S. Yadav, A. K. Yadava, D.P. Rao* <i>International Journal of ChemTech Research</i>, ISSN: 09744290, 3(4), 1863-1869, 2011, Q4 DOI: http://www.scopus.com/inward/record.url?eid=2-s2.0-84055191972&partnerID=MN8TOARS Scopus (Elsevier)</p>
68	<p>Syntheses and spectroscopic studies on macrocyclic complexes of dioxomolybdenum(VI) with furil as precursor. D.P. Rao*, H.S. Yadav, A.K. Yadava, S. Singh, U.S. Yadav <i>E-Journal of Chemistry</i>, ISSN: 09734945, 9(2), 497-503, 2012, IF 3.241 Indexing: SCIE, Q2 Journal of Chemistry, vol. 9, Article ID 205123, 7 pages, 2012 DOI: https://doi.org/10.1155/2012/205123 Web of Science, Scopus (Elsevier)</p>
69	<p>Synthesis and characterization of oxovanadium(IV) complexes with tetradentate Schiff-base ligands having thenil as precursor molecule. S. Singh, D.P. Rao*, A.K. Yadava, H.S. Yadav <i>Current Research in Chemistry</i>, ISSN: 19965052, 3(2), 106-113, 2011 DOI: https://doi.org/10.3923/crc.2011.106.113</p>
70	<p>In-situ preparation of macrocyclic complexes of dioxomolybdenum(VI) involving heterocyclic precursor. D.P. Rao*, H.S. Yadav, A.K. Yadava, S. Singh, U. S. Yadav <i>Journal of Coordination Chemistry</i>, ISSN: 00958972, 64(2), 293-299, 2011, IF 2.2 Indexing: SCIE, Q3 DOI: https://doi.org/10.1080/00958972.2010.544037 Web of Science, Scopus (Elsevier)</p>
71	<p>Role of nanoparticles in drug delivery. D.P. Rao*, S.K. Srivastav, C. Prasad, R. Saxena, S. Asthana <i>International Journal of Nanotechnology and Applications</i>, ISSN: 0973631X, 4(1), 45-49, 2010</p>
72	<p>Toxic load of tannery industries situated in Kanpur. D.P. Rao*, R. Saxena, V. Saxena, A. Singh <i>International Journal of Applied Environmental Sciences</i>, ISSN: 09736077, 4(3), 327-335, 2009 DOI: http://www.scopus.com/inward/record.url?eid=2-s2.0-70449107421&partnerID=MN8TOARS Scopus (Elsevier)</p>
73	<p>Correlation studies of chemical characterization of distillery effluents. D. P. Rao*, R. Saxena, V. Saxena <i>International Journal of Applied Environmental Sciences</i>, ISSN: 09736077, 4(2), 161-168, 2009 DOI: http://www.scopus.com/inward/record.url?eid=2-s2.0-70449119654&partnerID=MN8TOARS Scopus (Elsevier)</p>
74	<p>Isolation & characterization of per-oxidases from the leaves of <i>Ricinus Communis</i>. P. Kumar, M. Kamle, J. Singh, D. P. Rao* <i>International Journal of Biochemistry and Biotechnology</i>, ISSN: 09732691, 4(4), 283-292, 2008</p>

Book(s) published				
S. No.	Book Title	Type of Authorship	ISSN/ ISBN No.	Publisher
1.	A text book of Spectroscopy, Total Pages 128, 2013	Single	978-81-8378-113-8	Sahitya Ratnalay, Kanpur
2.	Inorganic Chemistry: An Introduction, Total Pages 186, 2015	Single	978-81-8378-130-5	Sahitya Ratnalay, Kanpur
3.	Organic Chemistry: An Introduction,	Single	978-81-8378-131-2	Sahitya Ratnalay, Kanpur

	Total Pages 154, 2017			
4.	DCEBCH-106 Spectroscopy, Total Pages 164, 2022	Editor	978-93-94487-48-2	Uttar Pradesh Rajarshi Tandon Open University

Patents		
Sl. No.	Title of Patent	Detail of Patent
1.	An approach for modelling and rationalizing organometallic chemistry with computation	Indian Patent / Publication No. 202311023189 / Publication Type- Ordinary / Date of Filing- 29-03-2023 / Publication Date- 19-05-2023
2.	Distillation Apparatus	Indian Design / Design No. 382985-001 / Date of Filing- 04-04-2023 / Issue Date- 27-06-2023
3.	Distillation Apparatus	UK Design / Design No. 6285031 / Date of Filing- 23-05-2023 / Grant Date- 06-07-2023

Book Chapter Published			
S. No.	Title with page nos.	Book Title, editor & publisher	ISBN No.
1	Plant Growth Promoting Rhizobacteria (PGPR): Mechanism, role in crop improvements and sustainable agriculture. Page No. 386-397, 2017	Advances in PGPR Research, CAB International-2017, U.K.	9781786390325 https://lccn.loc.gov/2017016222
2	Particulate Matter and its Impact on Plant Biochemical and Morphological Changes. Page No. 175-196, 2022	Advances in Plant Science, LAP LAMBERT Academic Publishing	9786205498545
3	Indoles: A Potential Drug Development Scaffold. Page No. 63-84, 2024	Multidisciplinary Approach and Applications of Material Science, Thanuj International Publishers, Tamil Nadu	9789394638815
4.	Discovery of a novel 4-pyridyl SLC-0111 analog targeting tumor-associated carbonic anhydrase isoform IX through tail-based design approach with potent anticancer activity Page No. 119-136	Recent advances in synthetic organic chemistry at the biomedical interface: honoring Professor Iwao Ojima on the occasion of his 80th birthday Frontiers in Chemistry, Switzerland	9782832570838 https://doi.org/10.3389/978-2-8325-7083-8

4.	Digital Viscometer	UK Design / Design No. 6294265 / Date of Filing- 04-07-2023 / Grant Date- 11-07-2023
5.	Novel Drug Delivery System Technique	Indian Copyright / Class of Work: Literary/ Dramatic / Diary Number: 12269/2024-CO/L / Date of Filing- 20-04-2024 / ROC Number: L-150341/2024
6.	Nanotechnology Based Device for Removing Heavy Metals from Juice	Indian Design / Design No. 427711-001 / Date of Filing- 21-08-2024 / Issue Date- 28-11-2024
7.	Advanced Rotary Evaporator	UK Design / Design No. 6403095 / Date of Filing- 08-11-2024 / Grant Date- 07-01-2024
8.	Portable Nano Water Purifier Bottle	Indian Patent / Publication No. 202511003240 / Publication Type- Ordinary / Date of Filing- 14-01-2025 / Publication Date- 31-01-2025
9.	Biochemistry Analyser	UK Design / Design No. 6421943 / Date of Filing- 06-02-2025 / Grant Date- 20-02-2025
10.	Fitness Water Bottle Usable as a Dumbbell for Resistance Training	UK Design / Design No. 6466513 / Date of Filing- 19-08-2025 / Grant Date- 01-09-2025

Research Projects

<p>1. <i>Small molecular scaffold as potential therapeutic against Plasmodium falciparum malaria</i> sponsored by CST UP Lucknow, India, 2025 (ongoing) CST/CHEM/D-1320 Dated: 27/08/2025, Dated 27-08-2025 Sanctioned Amount: 16.86 Lakh (INR)</p>
<p>2. <i>Catalytic and industrial application of multivalent molybdenum complexes as a bonafide chelating complex</i> sponsored by CST UP Lucknow, India, 2023 (ongoing) CST/CHEM/D-1426 Dated: 25/10/2023 Sanctioned Amount: 16.86 Lakh (INR)</p>
<p>3. <i>Bonafide chelating complexes of multivalent molybdenum</i> sponsored by CSJMU Kanpur, India, 2024 (completed) F. No. CSJMU/P&C/CVR/316/2024 Dated 07-MARCH-2024 Sanctioned Amount: 60K (INR)</p>
<p>4. <i>New Insights into the Chemistry of Dioxomolybdenum(VI) Complexes with Macrocyclic Ligands</i> sponsored by DHE UP Prayagraj, India 2021 (completed), Letter/RHEO / 208-09 / डेवलपमेंट / 2020-21 Date 19-04-2021 Sanctioned Amount: 3.0 Lakh (INR)</p>
<p>5. <i>Physico-chemical Studies of Wastewater and Distillery Effluents</i> sponsored by DHE UP Prayagraj, India, 2021 (completed), Letter/RHEO / 208-09 / डेवलपमेंट / 2020-21 Date 19-04-2021 Sanctioned Amount: 3.0 Lakh (INR)</p>
<p>6. <i>Synthesis and Characterization of Dioxomolybdenum(VI) Complexes with Different Compounds Involving Hetero Atoms and their Biological Importance</i> Sponsored by UGC, New Delhi, India, 2011-2014 (completed) Project F. No. 39 - 740/2010 (SR) Dated 06-JAN-2011 Sanctioned Amount: 2.26 Lakh (INR)</p>

Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant

S. No	Name of Award	Awarding Agency	Year
1.	Travel Grant	UGC, New Delhi	2011
2.	Travel Grant	UGC, New Delhi	2014
3.	Bharat Ratna Abdul Kalam Gold Medal	GEPR, New Delhi	2019
4.	Best Researcher	Scifax, New Delhi	2024
5.	Singhania Best Researcher Award	CSJMU Kanpur	2024
6.	D.Sc. Award	University of Central America	2024
7.	Consistent Research Performance Award	CSJMU Kanpur, India	2025

Journal as Editor-in-Chief / Editorial Board Member			
S. No.	Name of Journal	Role	Link
1.	GRS Journal of Multidisciplinary Research and Studies ISSN: 3049-0561	Editor-in-Chief	https://grspublisher.com/journal-details/GRSJMRs
2.	International Journal of Chemical Research ISSN: 0975-3699	Associate Editor	https://www.bioinfopublication.org/pages/journal.php?id=BPJ0000219&pg=editorial
3.	New Emerging Techniques in Pharmaceutics	Editorial Board Member	https://pharmaceutics.stripejournals.com/editorial-board/
4.	International Research Journal of Scientific Reports and Reviews ISSN: 3108-1711	Editor-in-Chief	https://irjsrr.com/index.php/IRJSRR/about/editorialTeam
5.	Journal of Medical Studies and Applied Sciences	Editor-in-Chief	https://journal.kalpsquadgroup.com/index.php/ojs3/about/editorialTeam
6.	Science Journal of Chemistry ISSN: 2330-0981	Senior Editor	https://www.sciencepg.com/journal/125/editorial-team#Senior_Editor

Ph.D. Guidance:

Awarded : 02

Ongoing : 05

Organized Seminars

- Organized a National Seminar on *Ganga Pollution: Analysis and Remedies* sponsored by UGC New Delhi dated 07-08 Oct. 2016
- Organized a National Seminar on *Food Chemistry, Processed Food & Toxicology* sponsored by Management dated 25-26 Sept. 2019
- Organized a National Seminar on *Waste Management: Role of Chemistry* sponsored by U.P. D.H.E, Prayagraj dated 22-23 Jan. 2020

Paper presented in International Conferences Abroad 02

Paper presented in International Conferences 04

Paper presented in National Conferences 32

Invited Lectures in National Conferences 10

Reviewer of the following Journals:

- Journal of Coordination Chemistry
- Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry
- Oriental Journal of Chemistry
- Journal of Chemistry
- Arabian Journal of Chemistry

Technical Editor of the following Journals:

- Journal of Applied Sciences
- Trends in Applied Sciences Research
- Asian Journal of Applied Sciences
- International Journal of Chemical Technology
- Current Research in Chemistry
- Associate Editor of International Journal of Chemical Research

MEMBERSHIP OF PROFESSIONAL BODIES

S. No.	Name / Nature of the Activity	Membership No.	Duration	Organization Institution / University
1	Life Membership	LM 072	19/09/2008	Vigyan Bharti
2	Life Membership	LM 757	08/09/2010	Association of Chemistry Teachers
3	Life Membership	L 16442	09/10/2010	Indian Science Congress

4	Life Membership	LM 498	07/02/2011	Society for Materials Chemistry
5	Life Membership	100257	09/04/2011	APCCBEES
6	Life Membership	85909D097	21/07/2017	Int. Journal of Chemical Research
7	Life Membership	http://asianpgpr.com/lifetime-Members.php	01/02/2022	Asian PGPR Society for Sustainable Agriculture
CAREER ADVANCEMENT COURSES				
1	Orientation Programme		29 th Aug.-25 th Sept. 2009	ASC, DDU Gorakhpur University
2	Refresher cum Workshop		16-22 Aug. 2010	STEP-HBTI, Kanpur
3	Refresher Course		8-28 Nov. 2010	ASC, University of Allahabad
4	Short Term Course		9-15 Oct. 2014	ASC, DDU Gorakhpur University
5	Refresher Course		2-23 Feb. 2015	ASC, University of Lucknow
6	FDP		20-25 June 2016	UPTTI, Kanpur
7	Short Term Course		7-13 Oct. 2017	ASC, University of Lucknow

Others:

1. Mentor in **State Child Science Exhibition**, 2004, at Govt. Jubilee Inter College, Gorakhpur, U.P.
2. Mentor in **State Child Science Exhibition**, 2004, on Nov. 19-23, 2004, at M.S.I. Inter College, Gorakhpur, U.P.