

Dr. Ranjeet Kumar

Assistant Professor
Department of Chemistry
C.M.P. College
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(Personal profile)

General Information

Father's Name : Late Hari Shankar Prasad
Mother's Name : Smt. Fulawatee Devi
Date of Birth : 01 January 1989
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Educational Qualifications:

Ph. D. : Medicinal and Structural Organic Chemistry, *Department of Chemistry, Institute of Science, Banaras Hindu University, Varanasi* (2017).
M. Sc. : Organic Chemistry, *Banaras Hindu University, Varanasi* (2010-2012).
B. Sc. : Chemistry and Botany, *VBS Purvanchal university, Jaunpur* (2007-2010).
Intermediate : Physics, Chemistry and Biology, *U. P. Board, Allahabad* (2004-2006).
High School : Science, *U. P. Board, Allahabad* (2002-2004).

Sanction Project for Research Work:

1. **Start up Grant from UGC Entitled “Modification in Physicochemical Properties of Active Pharmaceutical Ingredients for Successful Drug Delivery through Co-crystallization, Salt Formation and Dimerization: Perspective for Solubility, Stability and Bioavailability”** in year June 2019.
2. **Project from Department of Science and Technology, Govt. of U.P. Entitled “Synthesis and characterization of inorganic-organic materials for the fabrication of flexible thermometric generators”** in September 2022.

Postdoctoral Fellowship:

- National Post Doctoral Fellow (**SERB-NPDF**) in Solid State and Structural Chemistry Unit at Indian Institute of Science, Bangalore-560012, Karnataka, India Under the supervision of **Prof. T. N. Guru Row**, on the topic **“Co-crystallization, Polymorphs Growth, Salt Formation and Dimerization of Anticancer APIs-Excipients for Successful Drug Delivery: Perspective for Improvement of Solubility, Stability and Bioavailability”**.

Awards & Fellowship:

- National Post Doctoral Fellow (SERB-NPDF) 2017.
- Qualified **UGC-CSIR NET June 2012**.
- Qualified **Graduate Aptitude Test in Engineering (GATE 2012)** in Chemical Science.

Full List of Publications:

1. Akhilesh Kumar, Praveen Singh, **Ranjeet Kumar**, Priyanka Yadav, Amit Jaiswal, and Ashish Kumar Tewari, An Experimental and Theoretical Study of the Conformational Stability of Triazinone Fleximers: Quantitative Analysis for Intermolecular Interactions, *ChemistrySelect* 2023, 8, e202203862.
2. Ashwani Sharma, Kuldeep Mishra, Himani Chaurasia, **Ranjeet Kumar**, Reena Lawrence, Kapil Lawrence, Archana Pandey, *Journal of Emerging Technologies and Innovative Research* 2023, 10,C195.
3. Akhilesh Kumar, **Ranjeet Kumar**, Rashmi Dubey, Manisha Nidhar, Indresh Verma, Praveen Singh, Ashish Kumar Tewari, Quantitative intermolecular interactions analysis for amide-amide hydrogen-bonded synthons: Insilico studies for Cox-2 selective inhibitors, *Journal of Molecular Structure*, 2023, 1288, 135675.
4. Deepanjali Pandey, Shahid S. Narvi, **Ranjeet Kumar** and Jaromir Marek, Quantitative Intermolecular Interactions Analysis and Magnetic Properties of Thiocyanatoiron(II) Complex with Nicotinamide Ligand, *Russian Journal of Inorganic Chemistry* 2022, 67, 1557–1566
5. Ved Prakash Singh , Manisha Nidhar, Pratima Yadav, **Ranjeet Kumar**, Priyanka Sonker and Ashish Kumar Tewari, Design, synthesis, molecular modelling of heterodimer and inhibitors of α -amylase as hypoglycemic agents, **Molecular Diversity**, 2022, doi.org/10.1007/s11030-022-10414-8.
6. Priyanka Yadav,; Abhineet Verma,; Vishal Sharma, Rashmi Singh,; Tarun Yadav,; **Ranjeet Kumar**,; Shiv Pal,; Hariom Gupta,; Satyen Saha, ; Ashish Kumar Tewari, Development of robust folded scaffold as fluorescent materials using butylidene linked pyridazinone based systems via aromatic $\pi\cdots\pi$ Stacking Interactions, **New Journal of Chemistry**, 2022, 46, 5830-5838.
7. Pratima Yadav, **Ranjeet Kumar** and Ashish Kumar Tewari, Docking Simulation and Anti-Inflammatory Profile of Some Synthesized Heterodimer of Pyrazole’ **Russian Journal of Bioorganic Chemistry**, 2021, 46, 1148–1155.
8. Deepanjali Pandey, Shahid S. Narvi, **Ranjeet Kumar** and Siddhartha Chaudhuri, Crystal Structure and Magnetic Properties of Cu(II) Dinuclear Complex with Equatorial-Axial Bridging Thiocyanate ligand: Showing Ferromagnetic coupling, **Inorganic Chemistry Communications**, 2021, 130(2013), 108736.
9. Praveen Singh, **Ranjeet Kumar** and Ashish Kumar Tewari, Hydrogen bonding framework in imidazole derivatives: Crystal structure and Hirshfeld surface analysis, **European Journal of Chemistry**, 2020, 11(1):50-59.
10. Praveen Singh, **Ranjeet Kumar**, Ajeet K. Singh, Priyanka Yadav. Ranjana S. Khanna, Manjula Vinayak, Ashish Kumar Tewari, Synthesis and crystal structure of quinolinium salt: Assignment on nonsteroidal anti-inflammatory activity and DNA cleavage activity. **Journal of Molecular Structure**, (2018) 1163, 262.
11. **Ranjeet Kumar**, Praveen Singh, Simon Parsons and Ashish K. Tewari, Experimental and Theoretical Study for the Assessment of the Conformational Analysis of Pyrazolone Derivatives: Employing Quantitative Analysis for Intermolecular Interactions. **ChemistrySelect** (2017) 2, 6331.
12. **Ranjeet Kumar**, Pratima Yadav, Shiv Pal, Krishnan R. Kumar, Balasubramanian Sridhar, and Ashish K. Tewari, Conformational Studies of Triazole Based Flexible Molecules: A Comparative Analysis of Crystal Structure and Optimized Structure for DNA Binding Ability. **ChemistrySelect**, (2017) 2, 3444.
13. **Ranjeet Kumar**, Archana Gaurav, Shiv Pal, Dr. Krishnan R. Kumar, Dr. Balasubramanian Sridhar, and Dr. Ashish K. Tewari, Reverse Intramolecular

Stacking in o-Xylene Bridge Symmetrical Dimers of 2-Thiopyridine Derivative: Assessment of the Conformational Stability. **ChemistrySelect**, (2017) 2, 3249.

14. **Ranjeet Kumar**, Archana Gaurav, Shiv Pal, and Ashish Kumar Tewari, A Case of Folding Pattern in Flexible Tripodal of N-Substituted Bisethylenamine Bridged Pyridazinone Dimers. **ChemistrySelect**, (2017) 2, 1479.
15. **Ranjeet Kumar**, Sunil K. Rai, Praveen Singh, Archana Gaurav, Pratima Yadav, Ranjana S. Khanna, Hariom Gupta, and Ashish K. Tewari, Face-to-Face Stacking in Sulfonamide Based Bis-ethylene Bridged Heteroaromatic Dimers. **RSC Advances**, (2015) 5, 97205.
16. Sunil K. Rai, Praveen Singh, **Ranjeet Kumar**, Ashish K. Tewari, Jiří Hostaš, Ramachandran Gnanasekaran, and Pavel Hobza, Experimental and Theoretical Study for the Assessment of the Conformational Stability of Polymethylene-Bridged Heteroaromatic Dimers: A Case of Unprecedented Folding. **Crystal Growth & Design**, (2016) 16, 1176.
17. Archana Gaurav, **Ranjeet Kumar**, Hariom Gupta, K. Ravikumar, B. Sridhar, Ashish Kumar Tewari, Unprecedented folding in linker based flexible tripodal molecule and their conformational analysis. **Journal of Molecular Structure**, (2017) 1134, 781.
18. **Ranjeet Kumar**, Praveen Singh, Archana Gaurav, Pratima Yadav, Ranjana S Khanna, and Ashish Kumar Tewari, Synthesis of Diphenyl Pyridazinone Based Flexible System for Conformational Studies through Weak Noncovalent Interactions: Application in DNA binding. **Journal of Chemical Sciences**, (2016) 128, 555.
19. Praveen Singh, **Ranjeet Kumar**, Brijesh Kumar Yadav, Ranjana S. Khanna and Ashish Kumar Tewari, CCSO nano catalyzed solid phase synthesis of 3-oxo-5,6-adisubstituted-2,3-dihydropyridazine-4-carbonitrile. **RSC Advances**, (2014) 4, 51239.
20. Ashish Kumar Tewari, Priyanka Srivastava, Ved P. Singh, Praveen Singh, **Ranjeet Kumar**, Ranjana S. Khanna, Pankaj Srivastava, Ramachandran Gnanasekaran and Pavel Hobza, Selective induced polarization through electron transfer in acetone and pyrazole ester derivatives via C–H...O=C interaction. **New J. Chem.**, (2014) 38, 4885.
21. Praveen Singh, **Ranjeet Kumar**, Shachi Tiwari, Ranjana S. Khanna, Ashish Kumar Tewari and Hari Dev Khanna, Docking, Synthesis and Evaluation of Antioxidant activity of 2,4,5-triaryl imidazole. **Clinical and Medicinal Biochemistry**, (2015) 1: 105.
22. Priyanka Sonker, Ashish Kumar Tewari, Shail Kumar Chaube, **Ranjeet Kumar**, Vishal, Prasad Sharma, Akhilesh Sonker, Priyanka Yadav, A study on cancer and its drugs with their molecular structure and mechanism of action: A Review. **World Journal of Pharmaceutical Sciences** (2018) 6, 13.

Book Edited:

1. **Present Scenario of Environmental Challenges & Issues**

Book Chapter:

1. **Ranjeet Kumar** and Ashish Kumar Tewar ‘Isolation of Medicinally Important Constituents from Rare and Exotic Medicinal Plants’ 2018. ISBN: 9780081022740.
2. **Ranjeet Kumar** and Ashish Kumar Tewar ‘Medicinal Properties of Marine Plants’ 2018, ISSN No. ISBN: 9780081022740.
3. Signal generation in MIP sensors. Piyush Kumar Sonkar, Amit Jaiswal, **Ranjeet Kumar**, Angesh Kumar Maurya, Narvadeshwar and Amit Kumar Verma, Publisher: Matthew Deans, 2023, 115-122, ISBN: 978-0-323-91925-8; Book name: Molecularly Imprinted Polymers (MIPs) Edited by: Meenakshi Singh.

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