



R L JALAPPA INSTITUTE OF TECHNOLOGY

(Approved by AICTE, New Delhi, Affiliated to VTU, Belagavi & Accredited by NAAC – “A” Grade)
Doddaballapura - 561203, Bangalore Rural District

DEPARTMENT OF ALLIED SCIENCES

Faculty Name	Dr. Prachalith N.C.	
Designation	Assistant Professor	
Area of Interest	Quantum Chemical Computation, Spectroscopy, NPs, interactions, and irradiation modifications.	
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Research Identity	Orcid Id: 0000-0002-3816-6837 Scopus Id: 58001608200 Google Scholar Id: https://scholar.google.com/citations?hl=en&user=zpmKwocAAAAJ Research gate Id: https://www.researchgate.net/profile/Prachalith-N-C?ev=hdr_xprf	

EDUCATION: Doctor of Philosophy on “*Study of Photophysical Structural Properties of Some Organic Compounds*” from department of Physics, Vijayanagara Sri Krishnadevaraya University, Ballari, India.

TECHNICAL SKILLS: Performing the Virtual Labs and Quantum Chemical Calculations.

PROFESSIONAL WORK EXPERIENCE: 2 Years of teaching experience as a guest faculty in the first grade government degree college.

PUBLICATIONS:

JOURNAL; 11

1. **Prachalith, N. C.**, Vibha, K., Shilpa, K. G., Ravikantha, M. N., Annoji Reddy, R., Thipperudrappa, J., & U.V. Khadke. (2023). Quantum computations of non-steroidal anti-inflammatory drug molecules using Density Functional Theory. *Chemical Physics Impact*, 7, 100317, (Q2 journal, IF: 3.8)
2. **Prachalith, N. C.**, Vibha, K., Suresh Kumar, H. M., Thipperudrappa, J., and Khadke, U. V. (2025). Solvatochromism, preferential solvation and excited state dipole moments of flufenamic acid in different solvent polarities. *International Journal of Modern Physics B*, 39 (13), 2550104, (Q3 journal, IF: 2.8)
3. **Prachalith N.C.**, Bibi Raza Khanam, Basavaraj Angadi, Suresh Kumar H.M., Pravin Kumar, Birendra Singh, U.V. Khadke (2025), An Effective Approach for Pollution Remediation and Structural-Optical Analysis of Gamma-Irradiated Flufenamic Acid. *Next Materials*, 8, 100815, (Q1 journal).

4. Santhoshkumar Dani, **Prachalith Nagaleekara Channabasavanna**, Sudheendra Kulkarni, Shambonahalli Rajanna Manohara and Khadke Udayakumar (2022)., The electromagnetic interference shielding effectiveness and dielectric response of PVDF-nTiO₂Nanocomposites thin films. *Trends in Sciences*, 19(21), 3046-3046. (Q2 journal)
5. Vibha, K., **Prachalith, N. C.**, Reddy, R. A., Ravikantha, M. N., & Thipperudrappa, J. (2023). Computational studies on sulfonamide drug molecules by density functional theory. *Chemical Physics Impact*, 6, 100147. (Q2 journal, IF: 4.3)
6. Annoji Reddy R., **Prachalith, N. C.**, Ravikantha, M. N., Shilpa, K. G., & Thipperudrappa, J. (2023). Theoretical and Experimental Investigations of antibiotic agents Sulfamethoxazole (SMX) and Trimethoprim (TMP) by Density Functional Theory. *Mapana Journal of Sciences*, 22(1), 205-243. (UGC CARE Approved)
7. Khanam, B. R., **Prachalith, N. C.**, Ayub, H. A., Kousar, N., Kulkarni, S. S., Thipperudrappa, J., & Khadke, U. V. (2023). Green synthesis of silver nanoparticles using Plumeria obtusa leaves extract and concentration dependent physio-optic properties. *Materials Today: Proceedings*, 92, 1568-1574.
8. Khanam, B. R., **Prachalith, N. C.**, Basavaraj Angadi, Uma Reddy, B., & Khadke Udaykumar, (2023). The effect of reaction and annealing temperatures on physicochemical properties of highly stable ZnO nanoparticles synthesized via a green route using Plumeria obtusa L. *New Journal of Chemistry*, 47(41), 19122-19137. (Q2 journal, IF: 2.5)
9. Annoji Reddy R., Vibha K, Prachalith N. C., Suresh Kumar H. M., Ravikantha M.N., Thipperudrappa J., (2024) In-Depth Investigation of Solvatochromism, Excited State Dipole Moments and Preferential Solvation of Antibiotic Agents, *IOSR Journal Of Applied Physics (IOSR-JAP)*, 16(1), 23-36.
10. Vibha K, Prachalith N. C., Suresh Kumar H. M., Ravikantha M.N., Annoji Reddy R. and Thipperudrappa J., (2024). A Comprehensive Investigation of Solvatochromism and Solvation in Medicinally Significant Sulfa Drugs: Estimation of Excited State Dipole Moments. *Mapana Journal of Sciences*, 23(1). (UGC CARE Approved)
11. Vibha, K., Prachalith, N. C., Kumar, H. S., Ravikantha, M. N., Reddy, R. A., & Thipperudrappa, J. (2025), Utilizing sulfa drugs' pH-dependent spectral modifications for designing molecular logic gates. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 325, 125099. (Q2 journal, IF: 4.6).

PAPER PRESENTATION IN INTERNATIONAL CONFERENCE:

1. **Prachalith N.C.**, Thipperudrappa J. and U.V. Khadke, "Frontier Molecular orbital and Vibrational assignment studies on Ibuprofen by Experimental and Computational techniques" in the International Conference on Advancements in Science, Management and Engineering (ICSME-2022, Online)" Organized by Nrupathunga University, Bengaluru, Karnataka, in collaboration with RSP research Hub, Coimbatore, Tamilnadu, India on 26th and 27th February 2022.
2. **Prachalith N.C.** and U.V. Khadke, "Electronic, Vibrational and PED studies on Ketoprofen by Experimental / Computational Techniques" in the International Conference on Innovations in Computational and Physical Sciences for Sustainable Development (CONIAPS-2022) organized by Vijayanagara Sri Krishnadevaraya University, Ballari held on 21st – 23rd December 2022.
3. **Prachalith N.C.**, Vibha Suresh Kumar H.M., Thipperudrappa J., and U.V. Khadke "Experimental and theoretical estimation of physicochemical and electronic properties of ketoprofen" in 7th International Conference of Luminescence and its applications (ICAL-2023) Organized by CSIR- Indian Institute of Chemical Technology, Hyderabad, Held on 3rd - 6th July 2023.

4. **Prachalith N.C.**, Suresh Kumar H.M., Thipperudrappa J., U.V. Khadke, “Preferential solvation studies of Ibuprofen, Ketoprofen and Flufenamic acid in H₂O-THF binary solvent mixture” in International Conference on Advanced Materials and Fluid Mechanics (ICAMFM-2023) Organized by B.N.M. Institute of Technology, Bengaluru, BNMIT Bengaluru-500007, Held on 23rd and 24th November 2023.

PAPER PRESENTATION IN NATIONAL CONFERENCE:

1. **Prachalith N.C.** and U.V. Khadke, “Gamma Rays Unveiled: Transforming the Structure and Optical Properties of Ibuprofen” in National conference on Frontiers of ion beam sciences (FIBS-2024) Organized by Institute of Physics, Bhubaneswar, Odisha on 4th - 7th November 2024.

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