

L.A.D. & Smt. R.P. College for Women, Nagpur

FACULTY PROFILE



❖ Basic Information:

- **Name:** Dr. Ketkee Dharkar Khamborkar
- **Designation:** Assistant Professor
- **Department:** Chemistry
- **Area of Specialization:** Inorganic Chemistry, Polymer Chemistry, Environmental Chemistry.
- **VIDWAN ID-** 697839
- **ORCID ID** -0009-0001-7717-0142
- **Google Scholar ID-** ueEgIFQAAAAJ

❖ Educational Qualifications: MSc., PhD

❖ Teaching Experience:

- Total Teaching Experience: 10 Years.

❖ Research Experience :

- Total Research Experience: 14 Years.
- Areas of Research Interest: Inorganic chemistry, Polymer chemistry, Environmental chemistry.

❖ Research Publications:

(A) Research Papers in National/ International Journals:

- "Synthesis and characterization of p-hydroxyacetophenone (P) and aniline (A) with formaldehyde (F) terpolymeric ligand", Vidrabha Journal of Science, Amravati, 4, NO.3-4, pp 85-90, 2009.
- "Electrical Conductivity Properties of Newly Synthesized Melamine - Aniline - Formaldehyde Terpolymer and its Polychelates", International journal E- Journal of Chemistry, Vol 8(1), pp 127-130, 2011.

- “Synthesis, characterization and thermal decomposition of p-hydroxyacetophenone-aniline-formaldehyde terpolymeric ligand”, International journal Asian Journal of Chemistry, Vol. 23, No. 9, 3945-3948. 2011.
- “Thermal degradation analysis of melamine-aniline-formaldehyde terpolymeric ligand. International journal, Research journal of chemical sciences, vol. 2(12) 11-16, 2012.
- “Study of Conductivity Behaviour of Newly Synthesized Terpolymeric Ligand and its Polychelates with Mn(II),Fe(III),Co(II) Metal Ions”, International Journal of Researches in Biosciences Agriculture and Technology, Vol 1(2), 592-597, 2014.
- Waste to Wealth Bioplastics from floral offerings for sustainable future ,Page 61-68,Exploration Indian Journal of multidiscipline, E-IJM ,June 2025,Volume VII Issue - I,ISSN 2249-2089.
- Development of Starch based controlled release fertilizers from agricultural waste:Synthesis release kinetics, and environmental Applications page 861-868 , International Journal of advanced research in science engineering and technology, Volume12, Special issue, December 2025 (NC3EIP-2025) ISSN 2350-0328.

(B) Books / Book Chapters:

Authored 5 Books with ISBN Number.

- Textbook of B. Sc. Semester I (NEP) Food Adulteration ISBN: 978-81-975702-0-9
- Textbook of B. Sc. Semester I (NEP) Cosmetic Chemistry ISBN: 978-93-48359-93-3
- Textbook of B. Sc. semester II (NEP) Basics of Environmental Pollution ISBN: 978-93-48359-62-9
- Textbook of B. Sc. semester II (NEP) Kitchen and Nutrition Chemistry ISBN: 978-93-4835-95-13
- Textbook of B. Sc. semester III (NEP) Chemistry in Everyday Life ISBN: 978-93-48359-64-3

(C) Conference / Seminar Proceedings:

A) Research papers published in Proceedings of National Conferences:

- “Thermal degradation analysis of melamine-aniline-formaldehyde terpolymeric ligand and its polychelates”, Proceeding of NCRAMS, pp 50-55, 2010.
- “Electrical conductivity properties of terpolymeric resin derived from p-toluenesulfonic acid-m-cresol-formaldehyde, Proceeding of NCRAMS, pp 137-141, 2010.

B) Research papers published in Proceedings of International

Conferences:

- "Study of Swelling Properties of Bio-plastics Produced from Kitchen Waste", Proceeding of international Conference on Chemical and Biochemical Engineering (ICCBE) held in Kuala Lumpur, Malaysia, pp 17-20, 2019.

❖ Research Project:

Granted one Minor Research Project:

S.N.	Title	Funding Agency:	Year	Amount Sanctioned
1.	Titled: "Valorization of Agro-Waste for sustainable slow-release Fertilizers and Study its Adsorption/ Desorption Dynamics". Works as co-investigator (co- pi) dated: from 15/01/2025, project is on going	RTMNU, Nagpur under University Research Scheme	Sanctioned on 2024-2025	300000/-

❖ Orientation / Refresher Courses / FDPs Attended:

- FIP Course (9-13 October, 2023) Organized by L.A.D College, Nagpur.
- FDP Course (9-13 October, 2023) organized by L.A.D College, Nagpur.
- Attended 6 days FDP-Pragati ke path Par, organized by L.A.D. college Nagpur from 18th -24th July 2024.
- Completed online Refresher course in Basic sciences (Chemistry)
- Obtained A+ grade. Online mode 07th October to 19th October 2024 by UGC Malaviya Mission MMTTP (UGC), Teacher Training Centre, RTMNU, Nagpur.
- Completed NEP 2020 Orientation and Sensitization programme online mode on 16th to 30th March 2025 by MMT-TP(UGC), organized by Malaviya Mission Teacher training Centre RTMNU, Nagpur.

- Attended 6 days FDP-AI in research and Innovation, organized by L.A.D. college Nagpur from 18th -22th August 2025.
- Completed Orientation Program/faculty induction program, Obtained A+ grade, online mode, 01th December to 27th December 2025 by UGC- MMTTP, RTMNU, Nagpur.
- Completed six days online FDP, topic on “Role of chemical sciences towards sustainable development for “Vikasit Bharat” Online mode ,5-10th January 2026, by Department of Chemistry, under PM USHA MERU grant, Rani Chinamma University, Belgavi, Karnataka.

❖ **Papers Presented in Conferences / Seminars:**

A) Research Papers in Presented in National Conferences:

- “Thermal degradation studies of newly synthesized melamine-aniline-formaldehyde terpolymer and its polychelates”, National Conference for Chemistry and Health, held at Govt.IOS Nagpur, 2010.
- “Electrical conductivity properties of terpolymeric resin derived from sulphanilic acid-melamine-formaldehyde”, NCCH, Nagpur, 2010.
- “Electrical Conductivity of newly synthesized Terpolymer and its polychelates” UGC sponsored National conference on ‘New horizon in Chemistry’ organised by Thakur college of science, Mumbai. Oct 2012.

B) Research Papers in Presented in International Conferences:

- “Electrical Conductivity of newly synthesized Terpolymeric Ligand p-hydroxyacetophenone - aniline - formaldehyde and its Polychelates with Mn(II), Fe(III), Co(II) Metal Ions”, International Conference on “Chemistry for Mankind”, 2011.
- "Analysis Of Water Absorption Properties And Bio-Degradable Behaviour Of Bio-Plastics Produced From Fruit Peel Waste", International Conference On Biopolymers and Bio-Plastics", organized by EuroSciCon , Singapore , 2019.
- "Synthesis of Biodegradable Plastic from Temple Waste Produced in India and study their swelling kinetics " International Conference on advanced Physical, Chemical and Mathematical sciences, ICAPCM -2020, organized by R.T.M.N.U and L.I.T Nagpur, 2020.
- “Synthesis of Biopolymers from Fruit Shell Waste and Study Their Water Absorptivity and Swelling Kinetics” International Interdisciplinary Conference

on Tourism, Biodiversity and Development organized by Janta Mahavidyalaya, Chandrapur, 2023.

- Valorization of Waste Seeds into Sustainable Bioplastics: Development and Future Utilization Pathways. Got 3rd award at international level in International advanced materials, on 6th -7th February 2026, organised by M.P Deo Dharampeth Science, Nagpur, in association with IQAC, RTMNU Nagpur and ACT Mumbai.

❖ **Workshops / Seminars / Conferences Organized:**

- Worked as organizing member at National level conference 'Green Earth- Clean Earth, organized by L.A.D college Nagpur, on 10 February 2024.

❖ **Administrative Responsibilities:**

- Worked as Head, Department of Forensic Chemistry at Government IFS, Mumbai and Government IFS, Nagpur.

❖ **Membership of Professional Bodies:**

- Life member of Vigyan Bharti, Vidarbha Pradesh Mandal, (VIBHA)
- Member of RTMNU, Vidyapeeth Shikshan Manch, Nagpur.
- Life member of ACT- Association of chemistry teachers, Promoting excellence in Chemistry Education, Membership number 2666.
- Life member of AASCON, Institute of Science, Nagpur.

❖ **Awards / Recognitions:**

Achievements:

- RTMNU University 3rd Topper and Govt. Institute of Science, College Topper in MSc. Chemistry.
- Recipient of DAKSHINA fellowship for Research excellence from Govt. of Maharashtra for research work.
- Received 1ST prize, Best poster presentation Award at International interdisciplinary Conference on Tourism, biodiversity conservation and development held at Chandrapur.
- Pat on Back, for outstanding achievement in research by L.A. D College, Nagpur
- Received 3rd prize for poster presentation award at international level, International advanced materials on 6th -7th February 2026, M.P Deo Dharampeth Science, Nagpur in association with IQAC, RTMNU Nagpur and ACT Mumbai.

❖ **Extension Activities / Community Engagement:**

- Worked as Mentor for Vidarbha Vigyan Bharti Utsav Science Model, Poster, Rangoli Competition and Exhibition on 3rd & 4th January 2025.
- Teacher incharge for Skilled enhancement workshop on Hand Sanitizer at L.A.D.College ,Nagpur, 2025.

❖ **E-Content / MOOCs / ICT Use**

Swayam Courses completed:

“NEP-2020, professional development programme” Two credit course by Swayam (I.G.N.O.U) held from 1-31st December 2023, and obtained 97% marks.

❖ **Other Relevant Information:**

A) College committee Convenorship and Membership:

- Worked as committee member in Placement Employment cell, at Government IFS, Mumbai.
- Worked as organizing committee member of Workshop on “Fundamentals and Operations of Advanced Instruments” at Govt. IFS, Mumbai.
- Worked as Member of technical committee for purchase of instruments, chemicals and glassware and purchase committees at Govt. IFS, Nagpur.
- Worked as Convener at Govt.IFS Mumbai, Visit to Food and Drug Administration Lab, Mumbai.
- Worked as Convener at Govt.IFS Mumbai, Edu-Visit to Govt.Forensic Lab, Mumbai.
- Worked as Convener, Food and Drug Administration Lab Edu-Visit, Nagpur.
- Worked as committee member in Research, Conference and Workshop Committee, Exam Committee, Anti Ragging and Discipline Committee, NSS committee at Govt. IFS Nagpur.
- Worked as committee member in A.Q.A.R Criteria -5 at L.A.D College, Nagpur.
- Worked as organizing committee member in Chemical Society Activities : Science day program, Chem - Draw workshop, Floor Cleaner workshop, Scintilla magazine and convenor in hand sanitizer a skill development workshop, Edu-visits to FDA Nagpur, Raman Science centre Nagpur and Din show’s factory.
- Worked as committee member in S.Q.A.C committee and teacher incharge of SIP 2025.

- Worked as committee member -Fund raising, memento sapling distribution, Venue arrangement National level conference 'Green Earth- Clean Earth' organised by L.A.D College, Nagpur.
- Worked as committee member for Aura- college Gathering.
- Worked as committee member in discipline committee, Annual Prize Distribution, Nirmal cell, Maintenance, Swayamprakash publication cell, Admission committee, internal exam college level, cc activity, Research and Development Committee (Finance and Infrastructure), Intercollegiate competition outside college (Sarwankash) etc.
- Student Mentorship program- Mentor for BSc III year Batch-S6, BSc- I NEP major chemistry.

B) Contribution at university level:

- Worked as Committee member for designing new credit-based syllabus for PG diploma and first year BSc forensic science, Mumbai.
- Worked as Paper Setter, Examiner for B.Sc. and M.Sc. Examination of Mumbai University, Mumbai for the subject Forensic Chemistry.
- Worked as Paper Setter, Examiner for B.Sc. RTMNU, Nagpur for the subject Forensic Chemistry.
- Worked as paper valuer for BSc Chemistry odd semester 23-24, college/ RTMNU university exam.
- Worked as Examiner and paper valuer for BSc I year Chemistry college level, all internal Assessment exams 2023-24.
- Worked as Internal examiner for BSc- III year Chemistry Semester-VI, R.T.M.N.U Summer, Practical Exam-2024
- Worked as Internal examiner for BSc -I year Chemistry Semester- I winter- 2023 backlog practical college level exam.
- Worked as paper valuer and practical internal for college level and university level for BSc Chemistry.
- Worked as paper valuer for MSc. inorganic chemistry for Winter -2025.
- Worked as External examiner of BSc III year practical Exam Summer-2026 and Moderator for MSc Semester II inorganic Chemistry Summer 2026 for Autonomous college -Bajaj College of Science, Wardha.

C) Workshop/ programs Attended:

- State Level Workshop on “Advanced Analytical Instrumentation” at Science College, Nagpur, 2007.
- Workshop on “Fundamentals and Operations of Advanced Instruments”, at Institute of Forensic Science, Mumbai, 2013.
- One-week Faculty induction program conducted by L.A.D.& Smt. R.P.College for Women, Nagpur, 2023.
- One-week Faculty development program conducted by L.A.D.& Smt. R.P.College for Women, Nagpur, 2023.
- National level conference ‘Green Earth- Clean Earth, organized by LAD college Nagpur on 10 February 2024.
- International webinar on” Catalyzing diversity in Science” organized by Kamla Nehru Mahavidyalaya, Nagpur on 27 February 2024.
- One-week National workshop on “Intellectual Property Right-Patent and Industrial Design” 2 -credit course held from 18-22 March 2024 organized by R.T.M.N.U Nagpur.
- Attended 40th Annual conference of all Maharashtra federation of Principals association of Non govt. colleges, organized by Shri Shiwaji Education Society, Amaravati on 25th -26th July 2025.
- Mentor and member of Nutri wise cooking contest - Asia Book records,
- Participant of World record holder of Vidyapeeth Geet Gayan, at RTMNU Nagpur,2025.