

Curriculum Vitae

- (1) Name : Dr. C.L. Gehlot
(2) Date of Birth : 22-10-1971
(3) Present Position : Professor
(4) Father's Name : Shri P.R. Gehlot
(5) Address for Correspondence : Department of Chemistry,
Harcourt Butler Technical University,
Kanpur-208002(UP)
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Academic Qualifications:

- i. Doctorate from Jai Narain Vyas University, Jodhpur in the year 1999 with specialization in Photochemistry under the Supervision of Prof. K. M. Gangotri, Professor and Head, Department of Chemistry (Retired), Jai Narain Vyas University, Jodhpur
- ii. M.Sc. from Jai Narain Vyas University with first division in the year 1993 with specialization in Analytical Chemistry

Details of Employment :

- (i) Working as Professor, Department of Chemistry, Harcourt Butler Technical University, Kanpur (formerly HBTI, Kanpur) Since 06.11.2014
- (ii) Worked as Associate Professor (on deputation), School of Chemical Sciences, Central University of Gujarat, Gandhinagar from 13.02.2014 to 05.06.2015.
- (iii) Worked as Assistant Professor (pre revised Lecturer), Department of Chemistry, Harcourt Butler Technological Institute Kanpur from 06.11.199 to 05.11.2011.
- (iv) Worked as Chemical Assistant, Govt. Opium and Alkaloids Works, Neemuch, MP(Central Revenues Control Laboratory, Govt. of India), from 08.09.1997 to 02.11.1999.

Experience:

- (i) Teaching-23 Years and 3 Months (approx.) working since 06-11-1999.
- (ii) Research-19 Years (approx.)

Subjects/Courses Taught:

- (i) **Undergraduate level/B.Tech.:** Engineering Chemistry, Physical Chemistry, Analytical Chemistry, Modern Analytical Techniques etc.
- (ii) **Postgraduate level/M.Sc./M.Phil.:** Analytical Chemistry-II, III, IV, Industrial Hygiene and Chemical Safety, Analytical Techniques in Industrial Advancements, Advance Analytical Techniques, Waste Management Technology, Material Characterization Techniques, Analytical Techniques for Chemical Research & Research Advances in Chemistry etc.

Research Areas:

- (i) Photochemical Conversion and Storage of Energy
- (ii) Synthesis and Evaluation of Biological Activities
- (iii) Synthesis of agrowaste based adsorbent for removal of heavy metals

Research Supervision:(Ph.D./M.Phil.Supervision):

- (i) Mr. Shiv Govind Prasad, Thesis Title: Radiation Effect Studies on Some Novel Polymeric Materials Using Spectroscopic Techniques (Thesis Submitted in 2022).
- (ii) Dr. Nakul Kumar, Thesis Title: Synthesis of Novel Spiro Heterocyclic Indeno[1,2-B] Quinoxaline and Evaluation of Their Biological Activities (Awarded-2021).
- (iii) Dr. Bijendra Singh, Thesis Title: Photogalvanic Cell: A Device for Photochemical Conversion and Storage of Energy (Awarded-2021).
- (iv) Dr. Palaniappan N., Thesis Title: Study of Carbon Materials for Corrosion Inhibitors and Dye Sensitized Photovoltaic Cathodic Applications (Awarded-2020).
- (v) Dr. M. Sameer Reddy, Thesis Title: Development of Strategies for the Synthesis of Novel Poly Heterocyclic Spiro Molecules Via 1,3 -Dipolar Cycloaddition of Azomethine Ylides (Awarded-2019).
- (vi) Ms. Shanta Raj Lakshmi, Thesis Title: Stereoselective Michel Addition Reaction of Beta-Nitrostyrene and Furanone (M.Phil. Awarded-2016).
- (vii) Mr. Nakul Kumar, Thesis Title: Synthesis and Biological Activities of Some New Imidazole Derivatives (M.Phil. Awarded-2016)
- (viii) Mrs. Vasantha R., Thesis Title Mukaiyama Type Reaction of α -Chloro Sulfide (M.Phil. Awarded-2015)
- (ix) Dr. Saroj Yadav, Thesis Title: Use of Mixed Dyes as Photosensitizer in Photogalvanic Cell for Solar Energy Conversion and Storage (Awarded-2013).
- (x) Dr. Anuradha Singh, Thesis Title: Studies on Novel Chelating Resins (Awarded-2012).
- (xi) Dr. Kaneez Fatima Ansari, Thesis Title: Synthesis and Biological Activities of Some New Benzimidazole Derivatives (Awarded-2010)
- (xii) Dr. Shashi Prakash Tiwari, Thesis Title: Polymerization of Vinyl Monomers Initiated by Arsonium Ylide (Awarded-2008).
- (xiii) Ms. Ritu Gupta, Thesis Title: Removal of Heavy Metals from Industrial Effluents using New/Modified Adsorbent (Ph.D. In progress)
- (xiv) Ms. Shilpi Tiwari, Thesis Title: Studies on Effect of Nano Filler on Chemical, Mechanical and Thermal properties of Epoxy/Fly Ash Polymer Nano Composites (Ph.D. In progress)

Research Publications:

Total 40: Published-36 (Peer-reviewed International Journals-29), National Journals-06), (Accepted-01, Communicated-04)

Paper Presented in Conferences/Seminars: 20 (International-06, National-14)

Abroad Visit for Presentation of Research Papers:

- (i) Advanced Functional Materials (AFM2017) Organized by University of California, Los Angeles, 14-17 August, 2017 at Los Angeles, USA funded by UGC under Travel Grant.

- (ii) World Renewable Energy Congress-IX Organized by World Renewable Energy Network, UK, 19-25 August, 2006 at Florence, Italy funded by the World Bank Grant of the Institute.
- (iii) International Conference on Photochemical Conversion and Storage of Solar Energy (IPS-17), 27 July-01 August 2008, Sydney, Australia funded by UGC, New Delhi.
- (iv) International Conference on Environment (ICENV-2010), 13-15 December 2010, Penang, Malaysia funded by CSIR, New Delhi.

Research Projects:

- (i) UGC Sponsored Major Research Project entitled “Synthesis and Biological Activities of Some New Benzimidazole Derivatives” completed and final report submitted.
- (ii) Collaborative Research Project entitled “Synthesis and In-vitro Application of Multifunctional Biotemplated Contrast Agents for MRI “sanctioned by National Project Implementation Unit (NPIU), Govt. of India under Technical Quality Improvement Program-III (TEQIP-III).

Membership of Scientific Bodies/Societies:

- (i) Life Member of Indian Science Congress Association (L16335)
- (ii) Life Member of Indian Society for Technical Education (LM62306)
- (iii) Life Member of Indian Chemical Society (F/7694/LM/2014)

Industrial Experience:

02 Years (from 08-9-1997 to 02-11-1999) experience of analyzing opium and its alkaloids as Chemical Assistant Grade-II using modern instrument techniques at Govt. Opium and Alkaloids Works (Central Revenues Control Service, Govt. of India) Neemuch.

Short Term Training/Course/Conference/Seminars:

Refresher Courses-03, Workshop-02, Orientation Course-01, STTP-04, FDP-07 Conference organised-02(National), Workshop organised-01(National), Expert Lecture Series organized:01

Reviewer: Referred National and International Journals:

International Journal of Environmental Progress and Sustainable Energy
 International Journal of Electrical Power and Energy Systems
 International Journal of Renewable Energy
 European Journal of Medicinal Chemistry
 Journal of Bioorganic and Medicinal Chemistry
 International Journal of Green Energy
 Journal of Synthetic Communications
 Indian Journal of Chemical Technology

Journal of Solar Energy
Journal Applied Polymer Science
Journal Applied Energy

Administrative and Other Assignments:

- (i) Dean, School of Basic and Applied Sciences since Oct.2021.
- (ii) Head, Department of Chemistry (Oct.2015-Oct-2018 & Oct.2021–continue) and Assistant, Dean, Students Welfare (Oct.2015-Oct.2016), HBTI, Kanpur.
- (iii) Chairperson-Centre for Studies in Chemistry, Store and Disbursement officer (June 2014-June 2015) at Central University of Gujarat (CUG), Gandhinagar.
- (iv) Hostel Warden, HBTU, Kanpur(2001-2004, 2007-2012,2017-2022).
- (v) Store Purchase officer, HBTU, Kanpur(2009-2012,2021-continue).
- (vi) Centre Controller of U. P. State Engineering Admission Test (2006-2012).
- (vii) Member of University level NAAC, Project Steering Committee, University Grievance Redressal Committee, Academic Council, Sports Committee, Campus Development Committee, Board of Studies (BOS), Committee for Advance Studies in Research(CASR), ICT Committee and School purchase Committee and Stock Verification Committee etc. at Central University of Gujarat, Gandhinagar.

Other Academic Assignments:

- (i) Worked as member of various committees, such as University Statutes, Scholarship, Time-Table, Admission, Antiragging and Selection etc.
- (ii) Worked as Expert of Chemistry at CSJM Univ. Kanpur, Osmania University, Hyderabad, DMSRDE Kanpur, Integral Univ. Lucknow, RTM Nagpur, CDRI and CIMAP Lucknow.

Co-curricular Activities:

NCC A certificate and NSS certificate passed.

Selected Peer Reviewed Research Publications:

1. Modification of Optical Bandgap and Formation of Carbonaceous Clusters Due to 1.75 MeV N⁵⁺ Ion Irradiation in PET Polymers and Search for Chemical Reaction Mechanisms, *J. Bio-interface Research in Applied Chemistry*,13(1),1-17,2023, Shiv Govind Prasad, Chhagan Lal ,Kriti Ranjan Sahu, Udayan De (**Impact factor: 1.949**)
2. A Noble and Economical Method for the Synthesis of Low Cost Zeolites From Coal Fly Ash Waste, *Advances in Materials and Processing Technologies*, 8, 301- 319, 2022, Virendra Kumar Yadav, R. Suriyaprabha, Gajendra Kumar Inwati, Nitin Gupta, Bijendra Singh, Chhagan Lal, Pankaj Kumar, Meena Godha, Haresh Kalasariya (**Impact Factor: 2.37**)
3. A review on processing methods for agricultural waste derived adsorbents for Pb(II) ions sequestration from wastewater, *Separation Science and Technology*, 57(17),2735-2762,2022, Ritu Gupta, Chhagan Lal Gehlot, Sunil Kumar Yadav (**Impact factor: 2.799**)
4. Spectroscopic Investigation of Degradation Reaction Mechanism in X-rays Irradiation of HDPE, *J. Bio-interface Research in Applied Chemistry*, 11(2), 9405 - 9419,2021, Shiv

- Govind Prasad, Chhagan Lal, Kriti Ranjan Sahu, Abhijit Saha and Udayan De (**Impact factor: 1.949**)
5. Epoxy/Flyash from Indians oil Chulha/nano CaCO₃ nanocomposite: Studies on mechanical and thermal properties, *J. Polymer Composites*, 41, 3237-3249, 2020, Shilpi Tiwari, Chhagan Lal and Deepak Srivastava (**Impact factor:3.531**)
 6. Neodymium-decorated graphene oxide as a corrosion barrier layer on Ti6Al4V alloy in acidic medium, *J.RSC Advances*, 9, 8537-8545, 2019, N. Palaniappan, I.S. Cole, F. Caballero-Briones, S. Manickam, Chhagan Lal and J. Shashi Kumar (**Impact Factor:4.036**)
 7. Praseodymium-decorated graphene oxide as corrosion inhibitor in acidic media for the magnesium AZ31 alloy, *J. RSC Advances*, 8, 34275-34286, 2018, N. Palaniappan, Ivan. S. Cole, F. Caballero-Briones, Balasubramanian K. and Chhagan Lal (**Impact Factor:4.036**)
 8. Preparation and Adsorption Performance of a Novel Chelating Resin containing Pyrogallol Red, *International J. of Scientific Research Engineering and Technology*, 01, 148-153, 2015, Anuradha Singh, Chhagan Lal and D.K. Singh (**Impact Factor:3.241**)
 9. Optimization of performance characteristics of a mixed dye based photogalvanic cell for efficient solar energy conversion and storage, *J. Energy Conversion and Management*, 66, 271-276, 2013, Saroj Yadav and Chhagan Lal (**Impact Factor:11.533**)
 10. Synthesis, characterization and applications of a new chelating resins containing 4, 2(Thiazolylazo) resorcinol (TAR), *J. Separation Science and Technology*, 47(16) 2399-2407, 2012, Dhruv Singh, Anuradha Singh and Chhagan Lal (**Impact Factor:2.799**)
 11. Energy conversion and storage potential of photogalvanic cell based on mixed dyes system: EDTA – toluidine blue – Thionine, *J. Environ. Progress & Sustainable Energy*, 30(4), 754-761, 2011, Chhagan Lal and K.M. Gangotri (**Impact Factor: 2.824**)
 12. Efficient solar energy conversion and storage through photogalvanic cell: EDTA - BG+FG system, *International J. of Green Energy*, 8(2) 265-274, 2011, Saroj Yadav and Chhagan Lal (**Impact Factor: 2.459**)
 13. Synthesis and biological activity of some heterocyclic compounds containing benzimidazole and beta-lactam moiety, *J. Chemical Sciences.*, 121(6), 1017-1025, 2009, K.F. Ansari and Chhagan Lal (**Impact Factor: 2.150**)
 14. Synthesis, physico chemical properties and antimicrobial activity of some new benzimidazole derivatives, *European J. Medicinal Chemistry*, 44(10), 4028-4033, 2009, K.F. Ansari and Chhagan Lal (**Impact Factor: 7.088**)
 15. Synthesis and evaluation of some new benzimidazole derivatives as potential antimicrobial agents, *European J. Medicinal Chemistry*, 44(5), 2294-2299, 2009, K.F. Ansari and Chhagan Lal (**Impact Factor: 7.088**)
 16. Kinetics and mechanism of the radical copolymerization of 4-vinyl pyridine with methylacrylate initiated by p-acetyl benzylidene triphenyl arsonium ylide, *J. Applied. Polymer. Science.*, 113(5), 3354-3359, 2009, S.P. Tiwari and Chhagan Lal (**Impact Factor: 3.125**)
 17. p-Acetyl benzylidene triphenyl arsonium ylide initiated radical polymerization of methylacrylate, *J. Applied Polymer. Science* 1967-1972(2008), S.P. Tiwari, Chhagan Lal and A.K. Srivastava (**Impact Factor: 3.125**)
 18. Use of mixed dyes in a photogalvanic cell for solar energy conversion and storage: EDTA-Thionine-Azur B system, *J. Power Sources*, 164, 926-930, 2007, Chhagan Lal (**Impact Factor: 9.794**)
 19. Studies in photogalvanic effect and mixed dyes system: EDTA-Methylene blue Toluidine blue system, *International J. Energy Research*, 24, 365-371, 2000, K.M. Gangotri and

Chhagan Lal (Impact Factor: 5.164)

20. Use of Tergitol-7 in photogalvanic cell for solar energy conversion and storage: Toluidine Blue-Glucose system, *International J. Energy Research*, 20,581-585,1996, K.M. Gangotri, K.R. Genwa, Prashant Kalla, Chhagan Lal, O.P. Regar and Rajni Meena (Impact Factor: 5.164)

Papers Presented at National/International Conferences/Seminars:

1. Removal of Pb (II) from industrial effluents using new chemically modified adsorbents presented at 107th Indian Science Congress conference during 03.01.2020-07.01.2020 organized by University of Agricultural Sciences, GKVK Campus, Bangalore, Karnataka, Indian association with Indian Science Congress Association.
2. Corrosion inhibition studies on mild steel in acidic environment using the taro medicinal plant extract presented at 107th Indian Science Congress conference during 03.01.2020-07.01.2020 organized by University of Agricultural Sciences, GKVK Campus, Bangalore, Karnataka, Indian association with Indian Science Congress Association.
3. Extraction of Hg (II) from Industrial Solutions by Modified Jackfruit Leaves presented at International Seminar on Recent Advances on Chemical Sciences and Allied Areas and the 55th Annual Convention of Chemists during 28-30Dec.2018 organized by Indian Chemical Society at Department of Chemistry, G.B. College, Naugachia, Bihar.
4. Adsorption Mechanism of Hg(II) from Synthetic Solution and Industrial Wastewater Using Modified Grass presented at 55th Annual Convention of Chemists during 23-25 Dec.2017 organized by Indian Chemical Society at Department of Chemistry, UKA Tarsadia University, Bardoli, Surat, Gujarat.
5. Role of Dyes as Energy Materials in Photogalvanic Cells for Solar Energy Conversion and Storage presented at international Conference on Advanced Functional Materials (AFM-2017) during 14.08.2017-17.08.2017 organized by University of California, Los Angeles, USA.
6. Removal of Pb (II) from Aqueous Solutions and Waste water by Modified Date Palm Trunk Originated Activated Carbon presented at National Seminar on Recent Trends in Chemical Research (Progress and Advancement) during 05.02.2016-07.02.2016 organized by Jai Narain Vyas University, Jodhpur, Indian association with Indian Chemical Society.
7. Absorption Studies of Hg (II) using Date Palm Trunk derived activated carbon presented at National Symposium on Electrochemistry, energy and Environment during 16-18 Dec. 2016 organized by the Department of Chemistry Jai Narain Vyas University, Jodhpur.
8. Comparative Study of Photosensitizing Dyes in Photogalvanic Cells for Efficient Solar Energy Conversion and Storage presented at 52nd Annual Convention of Chemists 2015 and International Conference on Recent Advances in Chemical Sciences during 28.12.2015-30.12.2015 organized by JECRC University, Jaipur, India in association with Indian Chemical Society.
9. Optimization of performance characteristics of a mixed dye based photogalvanic cell for efficient solar energy conversion and storage: NMB-CB-EDTA system presented at National Conference on Innovation in Science and Technology for Inclusive Development during 22.03.2014-23.03.2014 organized by Chaudhary Charan Singh University, Meerut,

- Indian association with Indian Science Congress Association.
10. Green synthesis and biological activities of some new benzimidazole derivatives presented at 2nd International Conference on Emerging Trends in Engineering and Technology during 12.04.2013-13.04.2013 organized by Teerthankar Mahaveer University, Moradabad, India.
 11. An approach to green synthesis of some new benzimidazole derivatives bearing antimicrobial activities presented at 2nd International Science Congress during 08.12.2012-09.12.2012 organized by Bon Maharaj Engineering College, Vrindavan, Mathura, Indian association with International Science Congress Association.
 12. Energy conversion and storage potential of photogalvanic cell based on mixed dyes: EDTA- FG and CB system presented at International Conference on Environment (ICENV2010) during 13.12.2010-15.12.2010 organized by School of Chemical Engineering, University Sains, Penang, Malaysia.
 13. An expeditious solvent free green synthesis and biological activity of benzimidazole derivatives presented at Green Chem-2010- National seminar on Introduction to Green Chemistry Education: Theory and Practice during 22.10.2010-23.10.2010 organized by VSSD College, Kanpur, India.
 14. Photo galvanic cell as device for solar energy conversion and storage EDTA-TB-TH system presented at 17th International conference on photochemical conversion and storage of solar energy (IPS 17) during 27.07.2008-01.08.2008 organized by ARC Centre of Excellence, ICMS Pty Ltd, Sydney, NSW 2000, Australia.
 15. Photogalvanic effect studies of mixed dyes systems in view of solar energy conversion and storage presented at World Renewable Energy Congress-IX during 19.08.2006-25.08.2006 organized by World Renewable Energy Network, UK, Florence, Italy.
 16. Synthesis, physicochemical properties and biological activities of some new heterocyclic derivatives presented at National Conference on Emerging Trends in Chemical Sciences during 24.02.2010-26.02.2010 organized by Bundelkhand University, Jhansi, India.
 17. Photogalvanic effect studies of mixed dyes systems presented at 93rd Indian Science Congress during 03.01.2006-07.01.2006 organized by Acharya N. G. Ranga Agricultural University, Hyderabad, Indian association with Indian Science Congress Association.
 18. Studies of photogalvanic effect in view of solar energy conversion and storage: Mixed dyes system presented at 40th Annual Convention of Chemists during 23.12.2003-27.12.2003 organized by Bundelkhand University, Jhansi, India in association with Indian Chemical Society.
 19. Photogalvanic cell as a device for photochemical conversion and storage of energy presented at 38th Annual Convention of Chemists during 26.12.2001-29.12.2001 organized by JNV University, Jodhpur, Indian association with Indian Chemical Society.
 20. Use of photogalvanic cell for solar energy conversion and storage: Mixed dyes system presented at 34th Annual Convention of Chemists during 17.12.1997-20.12.1997 organized by University of Delhi, Indian association with Indian Chemical Society.