



# Kirori Mal College

(University of Delhi)

University of Delhi, Delhi-110007

(Phone No. - 011-7121 9084 : Email - principal@kmc.du.ac.in)



Print Date : 15-02-2026

## 1. Personal Profile

Title: Dr. First Name: **HEMLATA** Last Name: **VASHISHT**



Designation: **ASSISTANT PROFESSOR** Mobile No. -----

Phone No. (Office) ----- Phone No. (Residence): -----

Email: **hemlata.vashisht@kmc.du.ac.in** Webpage: -----

Facebook: ----- Twitter: -----

LinkedIn: ----- Instagram: -----

Youtube: ----- Research Gate Link: -----

Google Scholar Link: -----

Address: -----

## 2. Educational Qualifications

Degree/ Certification	Institution	Year
B.Sc. (H) Chemistry	Delhi University	2004
M.Phil. (Corrosion Chemistry)	Department of Chemistry, University of Delhi, Delhi-110007	2007
M.Sc.(H) Chemistry	Hansraj College, Department of Chemistry, University of Delhi	2006
Degree	Department of Chemistry, Delhi University	2012
Certificate	CSIR-UGC	2013

## 3. Career Profile & Administrative Assignments

Category	Role/ Designation	Department/ Committee	Date From - To	Remarks
ADMINISTRATIVE ASSIGNMENTS	MEMBER	CHEMISTRY Kirori Mal College, DU	14.Jul.2022 - 14.Jul.2023	Student- Faculty Committee
CAREER PROFILE	ASSISTANT PROFESSOR	CHEMISTRY MAHARAJA AGARSEN COLLEGE, DELHI	31.Jul.2012 - 20.Jan.2016	

ADMINISTRATIVE ASSIGNMENTS	MEMBER	CHEMISTRY Kirori Mal College	14.Jul.2022 - 14.Jul.2023	Purchase Committee
ADMINISTRATIVE ASSIGNMENTS	MEMBER	CHEMISTRY Kirori Mal College, DU	14.Jul.2022 - 14.Jul.2023	Library Committee
CAREER PROFILE	ASSISTANT PROFESSOR	CHEMISTRY DESHBANDHU COLLEGE(MORNING), DELHI	12.Feb.2016 - 01.Aug.2016	
CAREER PROFILE	ASSISTANT PROFESSOR	CHEMISTRY KIRORI MAL COLLEGE, DELHI	02.Aug.2016 - Till date	
ADMINISTRATIVE ASSIGNMENTS	MEMBER	CHEMISTRY Kirori Mal College	12.Sep.2023 - 12.Sep.2023	Scrutiny Student election
ADMINISTRATIVE ASSIGNMENTS	MEMBER	PORTAL COMMITTEE Kirori Mal College	22.May.2023 - Till date	
ADMINISTRATIVE ASSIGNMENTS	MEMBER	CHEMISTRY Kirori Mal College	14.Jul.2022 - 14.Jul.2023	
ADMINISTRATIVE ASSIGNMENTS	MEMBER	CHEMISTRY Kirori Mal College	14.Jul.2022 - 14.Jul.2023	Lab Management Committee
ADMINISTRATIVE ASSIGNMENTS	MEMBER	CHEMISTRY KIRORI MAL COLLEGE, DELHI	30.Jun.2022 - 08.Aug.2023	Lab Management Committee
ADMINISTRATIVE ASSIGNMENTS	MEMBER	PWD ADMISSIONS COMMITTEE Kirori Mal College	22.May.2023 - 25.Nov.2023	
ADMINISTRATIVE ASSIGNMENTS	MEMBER	CDRT - CENTRE FOR DISABILITY RESEARCH AND TRAINING Kirori Mal College, DU	28.Feb.2023 - Till date	
ADMINISTRATIVE ASSIGNMENTS	MEMBER	CHEMISTRY Kirori Mal College, DU	05.Dec.2024 - Till date	
ADMINISTRATIVE ASSIGNMENTS	IN-CHARGE	CHEMISTRY Kirori Mal College	23.Apr.2025 - Till date	B.Sc. Analytical Chemistry Admission Incharge
ADMINISTRATIVE ASSIGNMENTS	MEMBER	CHEMISTRY Kirori Mal College	23.Mar.2025 - Till date	Purchase Committee member
ADMINISTRATIVE ASSIGNMENTS	MEMBER	CHEMISTRY Kirori Mal College	23.Apr.2025 - Till date	Time-Rable Committee
ADMINISTRATIVE ASSIGNMENTS	MEMBER	CHEMISTRY Kirori Mal College	23.Apr.2025 - Till date	Committee for Catering Students Diversity
ADMINISTRATIVE ASSIGNMENTS	IN-CHARGE	CHEMISTRY Kirori Mal College	07.May.2025 - Till date	B.Sc. Analytical Chemistry
ADMINISTRATIVE ASSIGNMENTS	MEMBER	CHEMISTRY Kirori Mal College	07.May.2024 - 23.Apr.2025	Purchase Chemistry
ADMINISTRATIVE ASSIGNMENTS	MEMBER	CHEMISTRY Kirori Mal College	07.May.2024 - 23.Apr.2025	Seminar Committee

ADMINISTRATIVE ASSIGNMENTS	MEMBER	CHEMISTRY Kirori Mal College	07.May.2024 - 23.Apr.2025	Committee for catering Students Diversity
ADMINISTRATIVE ASSIGNMENTS	MEMBER	PORTAL COMMITTEE Kirori Mal College	21.Jun.2024 - 07.Jul.2025	Member
ADMINISTRATIVE ASSIGNMENTS	MEMBER	EQUAL OPPORTUNITY CELL Kirori Mal College	21.Jun.2024 - 07.Jul.2025	Member
ADMINISTRATIVE ASSIGNMENTS	MEMBER	PORTAL COMMITTEE Kirori Mal College, DU	22.Apr.2025 - Till date	
ADMINISTRATIVE ASSIGNMENTS	MEMBER	EQUAL OPPORTUNITY CELL Kirori Mal College, DU	22.Apr.2024 - Till date	
ADMINISTRATIVE ASSIGNMENTS	MEMBER	CHEMISTRY Kirori Mal College, DU	31.Jul.2024 - Till date	Admission In-Charge B.Sc. Analytical Chemistry
ADMINISTRATIVE ASSIGNMENTS	MEMBER	CHEMISTRY Kirori Mal College, DU	31.Jul.2024 - 07.Jul.2025	Purchase Committee
ADMINISTRATIVE ASSIGNMENTS	MEMBER	CHEMISTRY Kirori Mal College, DU	31.Jul.2024 - 07.Jul.2025	
ADMINISTRATIVE ASSIGNMENTS	MEMBER	CHEMISTRY Kirori Mal College, DU	22.Apr.2024 - Till date	Committee for catering students diversity

#### 4. Other Profiles

**Other Profile Name/ Description**

**AREAS OF INTEREST/ SPECIALIZATION**

Inorganic Chemistry

### SUBJECTS TAUGHT

Course Code*	Course Name	Sem.	Paper Code*	Title of Paper
DSC 1	B.Sc.(H) Chemistry	I	2172011101	Atomic Structure, and Chemical Bonding (Inorganic Chemistry-1)
DSC 1	B.Sc.(H) Chemistry	I	217201101	Inorganic Chemistry-1, Atomic Structure, and Chemical Bonding
Core	B.Sc. (H) Chemistry	IV	32171401	Inorganic Chemistry-III, Coordination Chemistry
Core	B.Sc. (H) Chemistry	IV	32171401	Inorganic Chemistry-III, Coordination Chemistry
Core	B.Sc. (H) Chemistry	III	32173902	Basic Analytical Chemistry
DSC-4	B.Sc.(H) Chemistry	II	2172011201	Chemistry of s and p block elements
DSC-4	B.Sc.(H) Chemistry	II	2172011201	Chemistry of s and p block elements

### UG/ PG RESEARCH PROJECTS/ INTERNSHIPS

KMC Research Project\_5 E

### 5. Research Guidance

Year	Guide For	Title of the Dissertation/ Thesis	Scholar Name	Status

### 6. Research Projects

Year	Title of Project	Sponsorship Agency	Duration	Amount Sanctioned	Date of Sanction

### 7. Publications

Category	Publication Name	Title	Name of Author	Reference Link/ DOI Link
JOURNAL PAPER (International)	Newly synthesized oxadiazole derivatives as corrosion inhibitors for mild steel in acidic medium: Experimental and theoretical approaches	Journal of Molecular Liquids	Dr. HEMLATA VASHISHT (Joint Author)	<a href="https://doi.org/10.1016/j.molliq.2022.11907">https://doi.org/10.1016/j.molliq.2022.11907</a>
JOURNAL PAPER (International)	Decyltriphenylphosphonium bromide containing hydrophobic alkyl-chain as a potential corrosion inhibitor for mild steel in sulfuric acid	Journal of Molecular Liquids	Dr. HEMLATA VASHISHT (Joint Author)	<a href="https://doi.org/10.1016/j.molliq.2021.11616">https://doi.org/10.1016/j.molliq.2021.11616</a>

JOURNAL PAPER (International)	Acid corrosion inhibition of ferrous and non-ferrous metal by nature friendly Ethoxycarbonylmethyltriphenylphosphonium Bromide (ECMTPB): Experimental and MD simulation evaluation	Journal of Molecular Liquids	Dr. HEMLATA VASHISHT (Joint Author)	<a href="https://doi.org/10.1016/j.molliq.2020.11370">https://doi.org/10.1016/j.molliq.2020.11370</a>
JOURNAL PAPER (International)	Isopentyltriphenylphosphonium bromide ionic liquid as a newly effective corrosion inhibitor on metal-electrolyte interface in acidic medium. Experimental, surface morphological (SEM-EDX AFM) and computational analysis	Journal of Molecular Liquids	Dr. HEMLATA VASHISHT (Joint Author)	<a href="https://doi.org/10.1016/j.molliq.2020.11383">https://doi.org/10.1016/j.molliq.2020.11383</a>
JOURNAL PAPER (International)	Anti-corrosion performance of eco-friendly inhibitor (2-aminobenzyl) triphenylphosphonium bromide ionic liquid on mild steel in 0.5 M sulfuric acid	Journal of Molecular Liquids	Dr. HEMLATA VASHISHT (Joint Author)	<a href="https://doi.org/10.1016/j.molliq.2018.04.04">https://doi.org/10.1016/j.molliq.2018.04.04</a>
JOURNAL PAPER (International)	Novel corona virus (COVID-19); Global efforts and effective investigational medicines: A review	Journal of Infection and Public Health	Dr. HEMLATA VASHISHT (Joint Author)	<a href="https://doi.org/10.1016/j.jiph.2021.04.011">https://doi.org/10.1016/j.jiph.2021.04.011</a>
JOURNAL PAPER (International)	Study of adsorption mechanism of chalcone derivatives on mild steel sulfuric acid interface	Journal of Molecular Liquids	Dr. HEMLATA VASHISHT (Joint Author)	<a href="https://doi.org/10.1016/j.molliq.2020.11389">https://doi.org/10.1016/j.molliq.2020.11389</a>
JOURNAL PAPER (International)	Polyurethane based triblock copolymer as corrosion inhibitor for mild steel in 0.5M H <sub>2</sub> SO <sub>4</sub>	ACS Industrial and Engineering Chemistry Research	Dr. HEMLATA VASHISHT (Joint Author)	<a href="http://dx.doi.org/10.1021/acs.iecr.6b03928">http://dx.doi.org/10.1021/acs.iecr.6b03928</a>
JOURNAL PAPER (International)	Ionic salt (4-ethoxybenzyl)- triphenylphosphonium bromide as a green corrosion inhibitor on mild steel in acidic medium: experimental and theoretical evaluation	RSC Advances	Dr. HEMLATA VASHISHT (Joint Author)	DOI: 10.1039/c6ra27526e rsc.li/rsc-advanc
JOURNAL PAPER (International)	Evaluation of (2-Hydroxyethyl) triphenyl phosphonium bromide as corrosion inhibitor for mild steel in sulphuric acid; International Journal of Electrochemical Science	International Journal of Electrochemical Science	Dr. HEMLATA VASHISHT (First Author)	
JOURNAL PAPER (International)	Evaluation of Benzyl triphenyl phosphonium chloride as corrosion inhibitor for mild steel in phosphoric acid	International Journal of Electrochemical Science	Dr. HEMLATA VASHISHT (First Author)	
JOURNAL PAPER (International)	Synergistic inhibition between Benzyl Triphenyl Phosphonium Chloride and Halide ions on the corrosion of mild steel in acidic medium	International Journal of Electrochemical Science	Dr. HEMLATA VASHISHT (First Author)	
JOURNAL PAPER (International)	Experimental and theoretical studies on inhibition of mild steel corrosion by some synthesized polyurethane tri-block copolymers	SCIENTIFIC REPORTS (Nature Publishing)	Dr. HEMLATA VASHISHT (Joint Author)	DOI: 10.1038/srep30937

JOURNAL PAPER (International)	Synergistic interactions between tetra butyl phosphonium hydroxide and iodide ions on the mild steel surface for corrosion inhibition in acidic medium	Journal of Molecular Liquids	Dr. HEMLATA VASHISHT (Joint Author)	<a href="http://dx.doi.org/10.1016/j.molliq.2016.09.001">http://dx.doi.org/10.1016/j.molliq.2016.09.001</a>
JOURNAL PAPER (International)	Polymeric surfactants as ideal substitutes for sustainable corrosion protection: A perspective on colloidal and interface properties	Advances in colloid and interface surface	Dr. HEMLATA VASHISHT (Joint Author)	<a href="https://doi.org/10.1016/j.cis.2023.102966">https://doi.org/10.1016/j.cis.2023.102966</a>
JOURNAL PAPER (International)	Newly synthesized oxadiazole derivatives as corrosion inhibitors for mild steel in acidic medium: Experimental and	Journal of Molecular Liquids	Hemlata Vashisht (Joint Author)	<a href="https://doi.org/10.1016/j.molliq.2022.119071">https://doi.org/10.1016/j.molliq.2022.119071</a>
CHAPTER (International)	Carbon-Based Molecularly Imprinted Polymers Smart Nanomaterials	DE GRUYTER	Hemlata Vashisht (First Author, Corresponding Author)	<a href="https://doi.org/10.1515/9783111503325-2">https://doi.org/10.1515/9783111503325-2</a>
CHAPTER (National)	Theory and Concepts in Main Group Clusters	Aaryush Publication	Hemlata Vashisht (Joint Author)	
RESEARCH PAPERS (National)	Development of functionalized nanowires for smart coatings used in corrosion inhibition	Int. J. Corros. Scale Inhib., 2024,	M. Goyal <sup>1</sup> , A. Kumar <sup>2</sup> , H. Vashisht <sup>3</sup> , S. Kumar <sup>2</sup> , R. Jain <sup>2</sup> and C. Mohan <sup>4</sup> (Joint Author)	<a href="http://dx.doi.org/10.17675/2305-6894-2024-13-4-26">http://dx.doi.org/10.17675/2305-6894-2024-13-4-26</a>
RESEARCH PAPERS (International)	Hydrophobic alkyl-chain-modified (4-bromobutyl) triphenyl phosphonium bromide as a potential corrosion inhibitor for mild steel in Yamuna River water of India	Journal of Molecular Structure	Hemlata Vashisht (Corresponding Author)	<a href="https://doi.org/10.1016/j.molstruc.2025.144001">https://doi.org/10.1016/j.molstruc.2025.144001</a>

## 8. Books

Category	Book Name	Title	Name of Author	ISSN/ ISBN Number
BOOK (National)	Volumetric Analysis and Inorganic Preparations	Dr. HEMLATA VASHISHT (Joint Author)	Aaryush Education	978-81-930437-8-3

## 9. Faculty Achievements

Year	Category of Achievement	Role	National/ International etc.	Name	Date From-To
2022	FACULTY INDUCTION PROGRAM ATTENDED	ASSISTANT PROFESSOR	National	4-Week Faculty Induction/Orientation Programme for "Faculty in Universities/Colleges/Institutes of Higher Education	20.Oct.2022 - 18.Nov.2022

2022	REFRESHER COURSE ATTENDED	ASSISTANT PROFESSOR	National	Online Two-Week Refresher Course in "CHEMISTRY"	29.Nov.2022 - 13.Dec.2022
2023	FACULTY DEVELOPMENT PROGRAM ATTENDED	ASSISTANT PROFESSOR	National	Faculty Development Program, Understanding Disability	03.Jul.2023 - 11.Aug.2023
2025	FACULTY DEVELOPMENT PROGRAM ATTENDED	PARTICIPANT	National	Malviya Mission Teacher Training Programme, NEP2020 Orientation & Sensitization Programme	14.Feb.2025 - 22.Feb.2025
2025	FACULTY DEVELOPMENT PROGRAM ATTENDED	PARTICIPANT	National	E-learning and MOOCS in Chemistry Teaching using Avogadro	28.Sep.2024 - 22.Oct.2024
2025	WORKSHOP/ SEMINAR/ CONFERENCE ATTENDED	PARTICIPANT	International	International Conference on Chemical, Biological and Environmental Sciences 2025 (IUPAC-ICCBES 2025)	11.Feb.2025 - 12.Feb.2025

**Dr. HEMLATA VASHISHT**