

Name of Department : CHEMISTRY

Year of Establishment : 1982

Name of Programs/Course offered : UG
PG
Ph.D

Annual/semester/choice based credit system : B.Sc. Annual+ Semester
: M.Sc. Semester

Number of teaching post

Designation	Sanctioned	Filled
Professor	01	01
Asst. professor	03	02
Teaching faculty (AD)	01	01
Teaching faculty (Janbhagidari)	01	01

Faculty profile

name	Qualification	Designation	Specialization	No. of years experience	No. of Ph.D. students guided
Dr. Rajesk K. Pathak	M.Sc., Ph.D	Professor	Physical chemistry	27 Years	10
Dr. Rajeev Dixit	M.Sc., Ph.D	Associat Professor	Physical chemistry	27Years	
Dr. Neelu Malviya	M.Sc., Ph.D	Asst. Professor	Organic chemistry	14Years	
Dr. Santosh Sahu	M.Sc., Ph.D	Guest faculty	chemistry		
Dr. Reena Dwivedi	M.Sc., Ph.D	Guest faculty	chemistry	17Years	

Number of academic support staff(technical) & administrative staff

Name	Technical/Administrative	Sanctioned	Filled
Dr. Sheetal Shreemal	Lab Technician	02	01
Raj Bhuriya	Lab Attendant	01	01

List of senior visiting faculty

Dr. S.P. Sing – Professor and head of School of Energy & Environment UTD, DAVV, Indore.

Dr. R .Prasad – Professor and head of School of Chemistry UTD, DAVV, Indore.

Dr. A. A Ansari – Professor and head of Chemistry, IKDC, Indore

Dr. G.S Holkar – Professor of Chemistry, Holkar, Indore

List of publication

Dr. R.K pathak

S. No.	Title of research paper	Name of the journal/Vol./ISSN/I SBN/Page No.	Remark
1	Potentiostatic electrochemical preparation and characterization of Al containing Nickel selenide.	Oriental J. chem. 29(4) 2013.	International
2	Potentiostatic electrochemical preparation and characterization of cobalt containing iron molybdenum thin film.	Ultra chem.9(3) 333 (2013).	International
3	Electrochemical preparation and characterization of Fe-Cu alloy on anodized alumina templates.	J. chem. & Chem. Sci. 3(4) 251(2013).	International
4	The analysis of water and locked soil quality using physic- chemical parameters in Sangwi reservoir.	I J P C B S 3(4) 1126 (2013).	International
5	The potentiostatic electrodeposition of indium doped aluminium selenide thin films.	Oriental j. Chem. 3(29) 1047 (2013)	International
6	Potentostatic electrochemical preparation and characterization of ZnCdSe.	J. Ind. St. Res. 3(9) 2013	International
7	Physico-chemical analysis of water and locked soil of sadli reservoir.	Int. Re .J.Env. sci.	International
8	Electrosynthesis and Characterization of	Res.J.chem.sci.3(4)44(2013)	International

	CdSeHgTl thin films.		
9	Ananalysis of water Quality using physico-chemical parameters, Satak reservoir.	Int. Res. J. Env. Sci. 2(1) 2013	International
10	Analysis and physico-chemical parameters of Sarvar Devla Sugar Mill studies of effluents.	Current word Env. 7(2) 313 (2012).	International
11	Electrochemical preparation and characterization of Ni deposition on Aluminium surface	J. Mat Sc. Res. Ind. 7, 267 (2010)	International
12	Synthesis and characterization of Gallium selenide nanostructures on porous aluminium oxide templets by high frequency alternating current electrolysis	J. Applied Surface Sc. 256, 2097	International
13	Potentiostatic electrosynthesis and characterization of Te containing CdSe Thin films (1) 219(2009)	. J. Mat .Sc. Res.Ind.6 (1) 219(2009)	International
14	Study of Electrosynthesis and characterization of In doped ZnSe.	J. Mat. Sc.res.5(2) 477(2008).	International
15	Galvanostatic deposition and corrosion studies of Te containing CuSe thin films.	JERAD. 3(1)122 (2008)	

Dr. Neelu Malviya

S.No.	Title of research paper	Name of the journal/Vol./ISSN/ISBN/Page No.	Remark
01	Phytochemical screening of some trees of college campus,	journal of environmental science, Vol 2(11), 13-17 pp, Nov(2013)	International

List of Publications:

International Journals:

- 1 Vapour phase methylation of pyridine with Methanol over the $Zn_{1-x}Mn_xFe_2O_4$
(X= 0, 0.25, 0.50, 0.75 and 1) Ferrites system.
A Radhe shyam, **R Dwivedi**, V S Reddy & R Prasad
Green.Chemistry 4, 558, **2002**.
Publisher—Royal Society of Chemistry
- 2 Ortho-Selective Vapour phase methylation of phenol over nanocrystalline
ferrospinel of varying Zn^{+2}/Mn^{+2} ions composition
Vanga. SReddy A Radhe shyam, **R Dwivedi** & R Prasad,
Journal of Chemical technology and Biotechnology.79, 1057-1068, **2004**
Publisher—Society of Chemical Industry
- 3 Kinetic studies and Mechanism Evolution of the Ammoxidation of 3-
Picoline Over V_2O_5/ZrO_2 Catalyst.
A Radhe shyam, **R Dwivedi**, V S Reddy & R Prasad
The Canadian Journal Of Chemical Engineering. 83, 274, **2005**.
Publisher—
- 4 Vapour Phase Catalytic Synthesis of 2- methyl pyrazine over
Nanocrystalline
ferrite catalyst.
Joyjit Basak, **Reena Dwivedi**, Samidha Saxena,, R. Prasad
Ind. Eng. Chem. Res. 46, 7039-7044. **2007**.
Publisher— American Chemical Society
- 5 Ammoxidation of Cyclohexanone over nanoporous TS-1 using UHP as an
Oxidant
Samidha Saxena, **Reena Dwivedi** and J. Okram.
Chemical Engineering Journal, 132, 61-66, **2007**.
Publisher—Ellsevier

- 6 Kinetics studies and mechanism evolution of the epoxidation of styrene over nanoporous Au doped TS-1
Samidha Saxena, **Reena Dwivedi**, Sheenu Bhadauria¹, Rajendra Prasad
Polish Journal of Chemical Technology, 12, 4, 72 - 78, **2010**.
- 7 Alkylation of Aniline with Ethanol over Nanocrystalline ZnFe_{2-x}Al_xO₄ (X= 0, 0.25, 0.50, 0.75 and 1) Ferrite System
Reena Dwivedi, Samidha Saxena, Sheenu Bhadauria,
Bulgarian Journal of Chemical Education, Chemistry, Vol. 20, Iss. 4 (2011)
E27-E38
- 8 Microwave assisted sol–gel synthesis of tetragonal zirconia nanoparticles
Nanoparticles
Reena Dwivedi, Anjali Maurya, R Prasad and K S Bartwal.
Journal of Alloys and Compounds, 509 (2011) 6848–6851.
- 9 Recent Progress in Non-linear Optical Material, Syntheses, Characterization and
Geometry Optimization of Dicinnamalacetone
Sheenu Bhadauria, Malyaj Das, **Reena Dwivedi**.
Scholars Research Library 2011, 2 (2):36-44
- 10 Effect of microwave on distribution of Zr⁴⁺ and Ti⁴⁺ during sol-gel
synthesis of ZrTiO₄ nanoparticles.
Reena Dwivedi, Akрати Verma, R. Prasad, K.S. Bartwal
Optical Materials, 35 (2012) 33-37.
Hindwai
- 11 Synthesis of ethylene carbonate from cyclocondensation of ethylene glycol
and urea over ZnO.Cr₂O₃ catalyst system Controlled by Co-precipitation
Method
Sheenu Bhadauria, Samidha Saxena, R. Prasad and **Reena Dwivedi**
European Journal of Chemistry, 3 (2), (2012), 235- 240.
- 12 Microwave-Assisted Synthesis of Mixed Metal-Oxide Nanoparticles
Akрати Verma, **Reena Dwivedi**, R. Prasad, K.S. Bartwal
Journal of Nanoparticles, (2013), 11
doi:10.1155/2013/737831.

- 13 Petri net based description and modeling of biosynthesis of Tetracycline.
Neena Shrivastava, **Reena Dwivedi**, Goshali Dwivedi, R Prasad
International Journal of Scientific & Engineering Research, 4(5), 814-820, 3013
- 14 A DFT assisted mechanism evolution of the Carbonylation of Ethylene glycol To ethylene carbonate by urea over $Zn(NCO)_2 \cdot (NH_3)_2$ catalyst.
Prabakar Sharma, **Reena Dwivedi**, Rajiv Dixit, Rajendra Prasad
Industrial & Engineering Chemistry Research 2013, 52, 10977–10987
Publication:- ACS, DOI- 10.1021/ie400745x
- 15 Synthesis, characterization, reactivity ratio of the copolymer of linoleic acid with methyl methacrylate using ferric chloride-potassium metabisulphite redox pair as initiator.
Annapurna Mehta, **Reena Dwivedi**, Rajendra Prasad
International Journal of Scientific & Engineering Research, 4,7, 2013
- 16 Soft Magnetic Properties of $Mg_{0.7-x}Ni_{0.3}Zn_xFe_2O_4$ Ferrites Synthesized by Solgel, Auto-Combustion Techiique Witheout Post-Preparation Thenmal Treatment
A. Ghosh, **Reena Dwivedi**, R. Prasad, N. Kane
International Journal of Modern Physics: Conference Series, 22, 2013, 28-34
- 17 A DFT Study of the Conformational Behavior of N''-[1-(5-chloro-2hydroxyphenyl) ethylidene]- N'''-[(1-(2-hydroxy-5-methylphenyl) ethylidene)] carbohydrazide
Reena dwivedi, Prabhakar Sharma, Rajiv Dixit and Rajendra Prasada
International Journal of Scientific & Engineering Research, 4, 11, 2013
- 19 Oxidative dehydrogenation of ethylbenzene to styrene over zirconium vanadate catalyst prepared by solution combustion method
Akrati Verma, **Reena Dwivedi**, Prabhakar Sharma and R. Prasad
Royal Society of Chemistry, Advances 4, 1799-1807, 2014
DOI: 10.1039/c3ra4384
- 20 Hydrogenation of Styrene Oxide to 2-Phenylethanol over Nanocrystalline Ni Prepared by Ethylene Glycol Reduction Method
Sunil K. Kanojiya, G. Shukla, S. Sharma, R. Dwivedi, P. Sharma, R. Prasad, M. Satalkar, and S. N. Kane

Hindawi Publishing Corporation, Article ID 406939
International Journal of Chemical Engineering, 2014, 6
<http://dx.doi.org/10.1155/2014/406939>

- 21 A DFT study of oxidative dehydrogenation of ethyl benzene to styrene over zirconium vanadate catalyst
Prabhakar Sharma, Reena Dwivedi, Rajiv Dixit, Manohar Singh Batra and Rajendra Prasad
Journal of Computational Methods in Molecular Design, 2014, 4 (4):1-14
- 22 Styrene over V₂O₅/TiO₂ Catalyst: Computational and Kinetic Approach
Prabhakar Sharma, Reena Dwivedi, Rajiv Dixit, Manohar Batra, Rajendra Prasad
Industrial and Engineering Chemistry Research International
Journal of Chemical Engineering Volume 2014 (2014), Article ID 406939, 6 P

National Journals:

- 1 Process optimization, kinetic & mechanism of the nitroxidation of 4-picoline over NiO: Fe₂O₃ catalyst system.
R Prasad, A Bharadwaj, S Vashisth & **R Dwivedi**
Indian Journal of chemical Technology, 3 (1996) 27
- 2 Ammoxidation of 3- picolines and toluene over firebrick supported (X=0,0.25,0.75 & 1) V₂O₅ catalyst in fixed bed reactor.
A Radhe shyam, V S Reddy, **R Dwivedi** & R Prasad.
Indian Journal of Chemical Technology NISCAIR (IJCT-1305)/2003.
- 3 Alkylation of Aniline with Ethanol over Zn_{1-x}Mn_xFe₂O₄ (X=0,0.25,0.75 and 1) Ferrite System
R Dwivedi, A Radhe shyam, R Prasad & H.P.S. Chauhan
Indian Journal of Chemistry. 11 (2004) 254
- 4 Spectroscopic and surface studies of catalytically active Zn_{1-x}Mn_xFe₂O₄ (X=0,0.25,0.75 and 1) Ferrosplinal systems.
A Radhe shyam, V S Reddy, **R Dwivedi** & R Prasad
Indian Journal of Chemistry. 43A (2004) 1088-1091

- 5 Destructive adsorption of methyl Parathion over nanocrystalline MgO.
Vanga S Reddy A Radhe shyam, **R Dwivedi** & R Prasad
Indian journal of chemistry, 44A (2005) 251-255.
- 6 Molecular Mechanics and Quantum Mechanical Studies of few
Hydroxybenzoate Derivatives
Sudele P, **Dwivedi R**, Prasad R.
Bioinformatics India; 3, 2005.
- 7 Vapour phase methylation of phenol over nanocrystalline $ZnFe_{2-x}Al_xO_4$ ($x =$
0, 0.25, 0.5, 0.75 & 1.0) ferrosipinel system
Vanga. S Reddy, A. RadheShyam, **R. Dwivedi**, R. Prasad
Indian journal of Chemical technology, 13, (2006), 496-498
- 8 Rigid thermosetting liquid moulding resin from sunflower oil
Navneet Hardia^a, P. L. Gupta^{b,*} **R.Dwivedi^a**, Samidha Saxena^a, R. Prasad^a
Indian journal of Chemical technology, 18, 271-276, 2011

Conference:- Paper Presentation

- 1 workshop on surface science and catalysis, organized by Holkar Science Science
Autonomous college, **Indore 6- 7 september,2002**
- 2 International conference, organized by Department of pure and applied chemistry **MDS**
university, Ajmer. Dec. 8-9, 2003
- 3 National conference on council of surface science and catalysis, organized by Department of
chemistry, guru Jambheshwar University, **Hisar. 13-14 march, 2005.**
- 4 National conference on high tec materials: Synthesis, Characterization and Applications,
organized by Disha Institute of management and technology, **Raipur Dec. 14-16, 2009**
- 5 International symposium on Ostwald 100 years of catalysis in chemical Research organized
by Sam higinbottom institute of Agriculture, technology & Sciences, **Allahabad, UP,3-4**
Dec. 2009
- 6 International science congress Association, organized by Maharaja ranjit singh college of
professional science, **Indore 25-25 Dec. 2011**
- 7 Recent trends in chemical and biological sciences, organized by Holkar Science Science
Autonomous college, **Indore 13- 15 January,20012.**

- 8 International conference on green technologies for environment rehabilitation, organized by Faculty of Engineering & Technology, Gurukul Kangri University, **Haridwar, Feb-11-13,2012**
- 9 International Conference on molecular spectroscopy of advanced materials and biomolecules, organized by bishop moore, mavelikara, **kerala, 7-9 2012**
- 10 National Seminar on photocatalytic Process and control of Environmental Pollution organized by Govt. PG Arts and Science college, **Ratlam, 27- 28 Feb. 20012.**
- 11 Mdhya Pradesh women science congress, organized by Holkar Science Science Autonomous college, **Indore 28- 29 December, 20014.**
- 12 Footprint of reserch trends in science for sustainble development of society by christian Eminent college, indore, 23rd june 2018

Faculty as Member

Name of Faculty	Name of the Body	Status of Membership
Dr. R. K. Pathak	Journal of Indian Chemical Society, Kolkata	Life
	Indian Association of Nuclear Chemists & Allied Scientists, Mumbai	Life
	Association of Indian Universities, New Delhi.	Life
Dr. Neelu Malviya	International Science Congress Association	Life
Dr Reena Dwivedi		Life

Student Project

(a) Percentage of students placed for projects in organization outside the institution.

Research laborites	10%
Industries	40%
Other agencies	20%

b) Percentage of students who have done in-house project

M. Sc. - 20%

Some students working on following topics :

1. Water analysis and different parameters.
2. Electroplating
3. Spectrophotometer

Rochlani Award (2018)

- Anita Baretha
- Aafreen Mansuri
- Satrupa panday

Seminar/ conference/ workshop organized

Workshop on Application of Chemistry in Daily Life by MLBGPG college on dated 10 Nov 2016

Ph.D. Awarded

1. Mrs. Anita Rathore
2. Mrs. Neelam Raja Jain
3. Mrs. Sarika Upadhya
4. Mr.Alok Agarwal
5. Mrs. Alka Shukla
6. Mrs.Nitika Kakani
7. Mrs.Asha Gayakwad
8. Mrs.Sharmila Bhaghel
9. Mr.Janeshwar Yadav
10. Mrs.Kavita Sharma
11. Mrs.Anupama Tiwari
12. Mrs.Nina (Sohani) Sharma
13. Mrs.Rachana Dubey
14. Neha Desmukh

Library

Reference Books

S.No.	Name of books	Name of author
1	Physical chemistry	A. J. Mee
2	Principals of physical chemistry	B.R. Puri
3	Advanced physical chemistry	Gurdeep R.chatwal
4	Organic reaction mechanism	P.S.Kalsi
5	Spectroscopy of organic compound	P.S.Kalsi
6	Confermation mechanism	P.S.Kalsi
7	Text book of quantitative inorganic analysis	J. Basset
8	Bioorganic , bioinorganic & supramolecular chemistry	P.S.Kalsi
9	Advanced practical physical chemistry	J.B.yadav
10	Vogal book of quantitative chemical analysis	J.mendhan e.l.
11	Analytical chemistry	S.M.khopker
12	Solid state chemistry &it's application	Antony west
13	Advanced practical chemistry	Gurdeep raj
14	Environmental chemistry	A.R.de
15	Inorganic chemistry	Chatwal
16	Analytical chemistry	Garyde christian
17	Biochemistry	C.B. chatwal Powar & gurdeep
18	Spectroscopy	Dr.H.Kour

19	Environmsetal chemistry	B.K.Sharma &H.Kour
20	Computers for chemist	Pundir &bawl
21		