




Faculty Details proforma for DU Web-site

(PLEASE FILL THIS IN AND Email it to websiteDU@du.ac.in)

Title	Professor	First Name	Rakesh Kumar	Last Name	Sharma	Photograph
Designation		Professor				
Address		Department of Chemistry, University of Delhi, Delhi 110007				
Phone No Office						
Residence Mobile		+919310050453				
Email		sharmark101@yahoo.com , sharmark@chemistry.du.ac.in				
Web-Page		http://www.du.ac.in/du/uploads/Faculty%20Profiles/Chemistry/Chem_Rakesh_Sharma.pdf				
Educational Qualifications						
Degree		Institution			Year	
Ph.D (chemistry)		Department of Chemistry, University of Delhi, India			2005	
M.Phil. (Physical Chemistry)		Department of Chemistry, University of Delhi, India			1999	
M.Sc (Physical Chemistry)		Department of Chemistry, Jamia Millia Islamia, India			1997	
B.Sc (G)		Ramjas College, University of Delhi, India			1995	
B.Ed (Teaching)		Department of Education (CIE) University of Delhi, India			1998	
Career Profile						
<ul style="list-style-type: none"> ▪ Professor (Physical Chemistry)-Department of Chemistry, University of Delhi (September 2020-Till date) ▪ Associate Professor (Physical Chemistry)-Department of Chemistry, University of Delhi (September 2017-September 2020) ▪ Assistant Professor (Physical Chemistry)-Department of Chemistry, University of Delhi 						

(September 2007-September 2017)

- **Lecturer** (Physical Chemistry)- Ramjas College, University of Delhi (July 2005 to Sept 2007).

Administrative Assignments

Member Admission committee- Department of Chemistry, University of Delhi- 2022

Member of prevention of caste based discrimination of SC/ST/OBC students, Department of Chemistry
DU 22-07-2022- till date

Member Bill Committee -Department of Chemistry, University of Delhi-2020- Till date

Co-coordinator in the Refresher course in chemistry (CPDHE-DU) October 27- November 10, 2020.

Dy Coordinator, Central Evaluation centre (CEC)- 2019

Dy. Superintendent M.Sc. Chemistry Theory Examination

Member of Science faculty, University of Delhi

Member of board of research studies, University of Delhi

Member of Committee of courses in both Undergraduate and post graduate courses Chemistry Department of
Delhi University May 2008- April 2010

Member Departmental Research committee (DRC) from May 2008-April 2010

Convener (Physical Chemistry Section) of Department of Chemistry May 2009-May 2010

Member of Academic standard Committee (Ramjas College) July 2006-May 2007

Special invitee: one day meeting of teachers of various colleges for syllabus revive, Department of Chemistry,
University of Delhi

Special invitee: one day meeting of teachers of various colleges for syllabus revive, Department of Chemistry,
University of Delhi

Member IR committee, Department of Chemistry, University of Delhi

Member Safety committee, Department of Chemistry, University of Delhi

Observer undergraduate admission for SC/ST in Delhi University

Observer in the recruitment of assistant professor in the department of Political sciences in Jesus & Merry
college Delhi University

Organizing committee member in various conferences

Expert in the promotion of Lab staff in various colleges of university of Delhi,

External examiner for practical and project evaluation for One year programme in nanotechnology in Maitrey
college Delhi University.

External examiner for practical and project evaluation in the department of applied sciences at AMITY
University. Noida

Etc.

Areas of Interest / Specialization				
Synthesis, Characterization and applications of metal/ceramic/ polymeric nanoparticles				
Subjects Taught				
Theory: Statistical mechanics, thermodynamics, kinetics and macromolecules, Chemical thermodynamics, Advanced Chemical Kinetics, <i>Quantum Chemistry/Mathematical Methods</i> . Practical: M.Sc (P) & M.Sc (F)				
Time table of the subjects taught during the current semester				
S.No.	Subject	Days	Time	Classroom
Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Research Guidance				
List against each head (If applicable)				
1. Supervision of awarded Doctoral Thesis 09				
Dr. Anita Yadav				
Dr. Anu Sharma				
Dr. Virender Kumar Meena				
Dr. Shivani Singh				
Dr. Shailja Kumar				
Dr. Sandeep Sharma				
Dr. Henam Premananda Singh				
Dr. Shruti Srivastava				
Dr. Nikesh Gupta				
2. Supervision of Doctoral Thesis, under progress 05				
Pooja Dahiya				
Pamthingla Ragui				
Anand Prakash				
Shalu Goel				
Ved Meena				
Publications Profile				

43 Nikesh Gupta, **Rakesh Kumar Sharma**, Amarnath Maitra, Anju Shrivastava (2023). In-vitro and in-vivo efficacy of hollow gold nanoparticles encapsulating horseradish peroxidase: Oxidative stress-mediated tumor cell killing. **Journal of Drug Delivery Science and Technology** 79, 103979 (I.F. 5.062).
<https://www.sciencedirect.com/science/article/pii/S1773224722008905>

42 Anu Sharma Parul Mittal, Anita Yadav, Anil K Mishra, Puja Panwar Hazari* **Rakesh Kumar Sharma*** (2022). Sustained Activity of Stimuli-Responsive Curcumin and Acemannan Based Hydrogel Patches in Wound Healing. **ACS Appl. Bio Mater.** 5, 2, 598–609 (I.F. 3.25).
<https://pubs.acs.org/doi/10.1021/acsabm.1c01078>

41 Anu Sharma, Abhishek Kumar, Changning Li, Puja Panwar Hazari, Supriya Mahajan,* Ravi kumar Aalinkeel,* **Rakesh Kumar Sharma***, Mark T. Swihart* (2021) A cannabidiol-loaded Mg-gallate metal–organicframework-based potential therapeutic for glioblastomas. **J. Mater. Chem. B.** 2021, 9, 2505-2514 (I.F. 7.571)
<https://pubs.rsc.org/en/content/articlelanding/2021/tb/d0tb02780d#!divAbstract>

40 Abhishek Kumar, Anu Sharma, Yi Chen, Megan M. Jones, Stephen T. Vanyo, Changning Li, Michelle B. Visser, Supriya D. Mahajan, **Rakesh Kumar Sharma*** and Mark T. Swihart* (2020) Copper@ZIF-8 Core-Shell Nanowires for Reusable Antimicrobial Face Masks. **Adv. Funct. Mater.** 2020, 2008054. (I.F. 19.924)
<https://onlinelibrary.wiley.com/doi/10.1002/adfm.202008054>

39 Anu Sharma, Abhishek Kumar, Changning Li, **Rakesh Kumar Sharma*** and Mark T. Swihart* (2020) Microencapsulated UVfilter@ZIF-8 basedsunscreens for broad spectrum UV protection. **RSC Adv.** 10, 34254. (IF 4.036)
<https://pubs.rsc.org/en/content/articlepdf/2020/ra/d0ra05828a>

38 Shivani Singh, Sweta Singh, **Rakesh K. Sharma**, Ankur Kaul, Rashi Mathur, Sarika Tomar, Raunak Varshneya and Anil K. Mishra (2020). Synthesis and preliminary evaluation of a ^{99m}Tc labelled deoxyglucose complex {[^{99m}Tc] DTPAbis(DG)} as a potential SPECT based probe for tumor imaging. **New J. Chem.**, 2020, 44, 3062. (IF 3.925)
<https://pubs.rsc.org/en/content/articlelanding/2020/nj/c9nj04705k#!divAbstract>

37 Anu Sharma, Anita Yadav, Katherine Cwiklinski, Elizabeth Quaye, Ravikumar Aalinkeel,

- Supriya D. Mahajan, Stanley A. Schwartz, **Rakesh Kumar Sharma*** (2019) In-vitro studies of curcumin encapsulated mesoporous Fe-Phenanthroline nanocluster for reduction of amyloid β plaque. **Journal of Drug Delivery Science and Technology** 54, 101314 (I.F. 5.062) <https://www.sciencedirect.com/science/article/pii/S1773224719310585>
- 36 Anita Yadav, Anu Sharma, **Rakesh Kumar Sharma*** (2019) Mesoporous iron gallate nanocomplex for adsorption and degradation of organic dyes. **Colloids and Surfaces A: Physicochemical and Engineering Aspects** 579, 123694. (IF 5.518) <https://www.sciencedirect.com/science/article/pii/S0927775719306752>
- 35 Virendra Kumar Meena, Shubhra Chaturvedi, **Rakesh Kumar Sharma**, Anil Kumar Mishra, and Puja Panwar Hazari (2019) A Potent Acetylcholinesterase Selective and Reversible Homodimeric Agent based on Tacrine for Theranostics. **Mol. Pharmaceutics** 16, 6, 2296-2308 (IF. 5.364) <https://pubs.acs.org/doi/10.1021/acs.molpharmaceut.8b01058>
- 34 Anu Sharma, Anita Yadav, Nikesh Gupta, Sandeep Sharma, Rita Kakkar, Katherine Cwiklinski, Elizabeth Quaye, Supriya D. Mahajan, Stanley A. Schwartz*, **Rakesh Kumar Sharma*** (2019) Multifunctional mesoporous curcumin encapsulated iron-phenanthroline nanocluster: A new Anti-HIV agent. **Colloids and Surfaces B: Biointerfaces** 180, 289–297,(IF. 5.999) <https://www.sciencedirect.com/science/article/pii/S0927776519302887?via%3Dihub>
- 33 Shailja Kumar, **Rakesh Kumar Sharma*** (2019) Work Function Based catalytic activity of Metallic Nanoparticles for Dye Degradation. **Catalysis Letters**. 149, 2268–2278 (IF. 3.186) <https://link.springer.com/content/pdf/10.1007%2Fs10562-019-02744-4.pdf>
- 32 Anu Sharma, Anita Yadav, Surender Kumar Sharma, **Rakesh kumar Sharma*** (2019) Laser induced morphology change in copper sulphide nanoparticles. **Colloid & surface A: physicochem. Eng. Aspects** 565, 172-179 (IF 5.518) <https://www.sciencedirect.com/science/article/pii/S0927775719300044>
- 31 Shailja Kumar, Virendra Kumar Meena, Puja Panwar Hazari, Surinder Kumar Sharma **Rakesh Kumar Sharma*** 2018, Rose Bengal attached and dextran coated gadolinium oxide nanoparticles for potential diagnostic imaging applications. **European J. Pharmaceutical Sciences** 117, 362-370. (IF 5.112). https://www.icmr.nic.in/sites/default/files/scientist_publication_pdf/Rose%20Bengal%20attached%20and%20dextran%20coated%20gadolinium%20oxide%20copy_0.pdf
- 30 Shivani Singh, Shweta Singh, Anjani kumar Tiwari, **Rakesh Kumar Sharma**, Rashi Mathur

and Ankur Kaul, 2018. A novel ^{18}F labeled Imidazo-oxazolopyridine derivative as β -amyloid imaging agent: Synthesis and preliminary evaluation. **Asian J. chemistry**, 30, 183-190 (**I.F. 0.535**) <https://pdfs.semanticscholar.org/a411/0ba24e45a5dc30c7821b6e2dcf47d2516be6.pdf>

29 Rakesh Kumar Sharma, Katherine Cwiklinski, Ravikumar Aalinkeel, Jessica L Reynolds, Donald E. Sykes, Elizabeth Quaye, James Oh, Supriya D. Mahajan, and Stanley A. Schwartz* 2017 Immunomodulatory activities of curcumin-stabilized silver nanoparticles: Efficacy as an antiretroviral therapeutic. **Immunological Investigations**, 46(8), 833-846. (**I.F. 3.657**). <https://www.tandfonline.com/doi/full/10.1080/08820139.2017.1371908?needAccess=true>

28 Shailja Kumar, Virendra Kumar Meena, Puja Panwar Hazari*, **Rakesh Kumar Sharma*** 2017 PEG coated and doxorubicin loaded multimodal Gadolinium oxide nanoparticles for simultaneous drug delivery and imaging application. **International Journal of Pharmaceutics**. 142–150, (**I.F 6.51**) <http://www.sciencedirect.com/science/article/pii/S0378517317304398>

27 Nikesh Gupta, Chetna Gupta, Sandeep Sharma, Brijesh Rathi, **Rakesh Kumar Sharma*** and H. B. Bohidar*, 2016 Magnetic iron oxide nanoparticles encapsulating horseradish peroxidase (HRP): synthesis, characterization and carrier for the generation of free radicals for potential applications in cancer therapy. **RSC Advances** 110460 – 111631, (**IF 4.036**) <http://pubs.rsc.org/en/content/articlelanding/2016/ra/c6ra24586b#!divAbstract>

26 Sandeep Sharma, Nitish Panchal, Surinder Kumar Sharma, **Rakesh Kumar Sharma***, Phool Kumar Patanjali*, 2016 Kinetic Study of Hydrolysis of Chlorpyrifos Using Gallic Acid Coated Silver Nanoparticles. **Advanced Science Engineering and Medicine (ASEM)** 941-946, (**IF 0.967**) <http://www.ingentaconnect.com/contentone/asp/ asem/2016/00000008/00000012/art00003>

25 Shailja Kumar, Virendra Kumar Meena, Puja Panwar Hazari*, **Rakesh Kumar Sharma*** 2016 FITC-Dextran entrapped and silica coated gadolinium oxide nanoparticles for synchronous optical and magnetic resonance imaging applications. **International Journal of Pharmaceutics**, 506,242–252 (**I.F 6.51**) <http://www.sciencedirect.com/science/article/pii/S0378517316302496>

24 Nikesh gupta, Chetna gupta, Sandeep sharma, **Rakesh Kumar Sharma***, H.B. Bohidar* 2015 Comparitive study of antibacterial activity of standard antibiotic with silver nanoparticles synthesized using ocimum tenuiflorum and garcinia mangostana leaves. **Chem. Biol. Lett.** 2(2),41-44 (**Cite Factor 6.6**). <http://pubs.iscience.in/journal/index.php/cbl/article/view/356>

23 Henam Premananda Singh, Sarbjeet Singh Gujral, Surinder Kumar Sharma, **Rakesh Kumar**

Sharma* 2015 Tannic acid: A natural source to tailor nano crystalline silver particles of different morphologies as antibacterial agent. **Adv. Mater. Lett.** 6(12), 1043-1049 (I.F. 1.15)

<http://amlett.com/articles/details/753/>

22 Shailja Kumar, Henam Premananda Singh, **Rakesh Kumar Sharma*** 2015 Facile Synthesis of gold nanocatalyst for redox reaction between potassium ferricyanide and sodium thiosulphate—An electron relay effect. **Advanced Science Engineering and Medicine (ASEM)**, 7, 1–8, (IF 0.967)

<http://www.ingentaconnect.com/content/asp/ asem/2015/00000007/00000009/art00008?token=004014d83b6d67232d45232b4224316a38574779287d703568263c7bd4cca36e>

21 Henam Premananda Singh, Susmita Mitra and **Rakesh Kumar Sharma***, 2014 Surface modified silica nanoparticles for synchronous magnetic resonance imaging and drug delivery applications. **RSC Adv.** 4, 61028–61035 (IF 4.036)

<http://pubs.rsc.org/en/content/articlelanding/2014/ra/c4ra06367h#!divAbstract>

20 Henam Premananda Singh, Nikesh Gupta, **Rakesh Kumar Sharma***, 2014 Ethnopharmacological Damdei plant extract assisted synthesis of copper nanoparticles and evaluation in non-enzymatic kinetics of o-dianisidine oxidation. **J. Biomed. Ther. Sci.** 1(1), 34–40 (I.F. 3.2) <http://www.pubs.iscience.in/journal/index.php/jbts/article/view/214>

19 Henam Premananda Singh, Sandeep Sharma, Surinder Kumar Sharma, **Rakesh Kumar Sharma***, 2014 Biogenic synthesis of metal nanocatalysts using Mimosa pudica leaves for efficient reduction of aromatic nitrocompounds. **RSC Adv.**, 2014, 4, 37816–37825 (IF 4.036)

<http://pubs.rsc.org/en/content/authorreprints>

18 Henam Premananda Singh, Nikesh Gupta, **Rakesh Kumar Sharma***, 2013 Hollow Silica Nanoparticles As Support For Catalase Enzyme Immobilization. **Catalysis Letters:** 143, 12, 1304-1311 (IF. 3.186) <http://link.springer.com/article/10.1007%2Fs10562-013-1080-9>

17 Henam Premananda Singh, Nikesh Gupta, Surinder Kumar Sharma, **Rakesh Kumar Sharma***, 2013. Synthesis of bimetallic Pt-Cu nanoparticles and their application in the reduction of Rhodamine B **Colloids and Surfaces A: Physicochem. Eng. Aspects** 416, 43–50. (IF 5.518)

<http://www.sciencedirect.com/science/article/pii/S0927775712006693>

16 Anil Kumar Nain*, Monika Lather, **Rakesh Kumar Sharma**, 2013. Study of solute– solute and solute–solvent interactions of l-methionine in aqueous-sucrose solutions at different temperatures. **J. Chem. Thermodynamics** 58, 101–109. (IF 3.269)

<http://www.sciencedirect.com/science/article/pii/S0021961412004065>

15 Nikesh Gupta, Aanchal Panwar, Ravindra Kumar, Surinder Kumar Sharma, **Rakesh Kumar Sharma***, Veena Agrawal*, 2013. Green Approach For Synthesis of Silver Nanoparticles and Their Antibacterial Activity Against Multi Drug Resistant Human Pathogens. **Advanced science engineering and medicine (ASEM)** 5, 355–361(7). (IF **0.967**) <http://www.ingentaconnect.com/content/asp/ asem/2013/00000005/00000004/art00011?crawler=true>

14 Nikesh Gupta, Anju Shrivastava*, **Rakesh Kumar Sharma***, 2012. Silica Nanoparticles Co-Encapsulating Gadolinium Oxide and Horse Radish Peroxidase for Imaging and Therapeutic Applications. **International Journal of Nanomedicine** 7, 5491–5500. (IF **6.4**) <http://www.dovepress.com/silica-nanoparticles-coencapsulatinggadolinium-oxide-and-horseradish--peer-reviewed-article-IJN>

13 Anil Kumar Nain, Renu Pal, **Rakesh Kumar Sharma***, 2012. Physicochemical study of solute–solute and solute–solvent interactions of l-histidine in water+sucrose solutions at different temperatures. **Journal of Molecular Liquids** 165,154–160. (IF **6.633**) <http://www.sciencedirect.com/science/article/pii/S0167732211003758>

12 Nikesh Gupta, Henam Premananda Singh, **Rakesh Kumar Sharma***, 2011. Metal nanoparticles with high catalytic activity in the degradation of Methyl orange: An electron relay effect. **J. Mol. Catalysis A: Chemical (Currently Molecular catalysis)** 335, 248–252. (IF **5.089**) <http://www.sciencedirect.com/science/article/pii/S1381116910005212>

11 Gajadhar Bhakta, **Rakesh Kumar Sharma**, Nikesh Gupta, Simon Cool, Victor Nurcombe and Amarnath Maitra*, 2011. Multifunctional silica nanoparticles with potentials of imaging and gene delivery. **Nanomedicine NBM.** 7, 472-479. (IF **6.458**) [http://www.nanomedjournal.com/article/S1549-9634\(10\)00435-1/abstract](http://www.nanomedjournal.com/article/S1549-9634(10)00435-1/abstract)

10 Shruti Srivastava, Surender Kumar Sharma, **Rakesh Kumar Sharma***, 2011. Synthesis of Gold nanorods using highly concentrated Aerosol OT in hexane and its application as catalyst for the reduction of eosin. **Colloids and Surfaces A: Physicochemical and Engineering Aspects** 373, 61-65. (IF **5.518**) <http://www.sciencedirect.com/science/article/pii/S0927775710005935>

9 Ritu Chauhan, Jitender Madan, Dinesh Kaushik, Satish Sardana, Ravi Shankar Pandey and **Rakesh Kumar Sharma**, 2011. Inclusion complex of colchicine in hydroxypropyl- β -cyclodextrin tends better solubility and improved pharmacokinetics. **Pharmaceutical**

Development and Technology, 18, 313-322. (IF 3.133)

<http://informahealthcare.com/doi/abs/10.3109/10837450.2011.591801?prevSearch=allfield%253A%2528Ritu%2BC Chauhan%2529&searchHistoryKey=>

8 Anil Kumar Nain*, Monika Lather, **Rakesh Kumar Sharma**, 2011. Volumetric, ultrasonic and viscometric behavior of l-methionine in aqueous-glucose solutions at different temperatures.

Journal of Molecular Liquids, 159, 180–188. (IF 6.633)
<http://www.sciencedirect.com/science/article/pii/S0167732211000250>

7 Anil Kumar Nain*, Renu Pal; **Rakesh Kumar Sharma**, 2011. Volumetric, ultrasonic and viscometric behaviour of l-histidine in aqueous-glucose solutions at different temperatures. **The**

Journal of Chemical Thermodynamics, 43, 603–612. (IF 3.269)
<http://www.sciencedirect.com/science/article/pii/S0021961410003551>

6 Nikesh Gupta, Henam Premananda Singh, **Rakesh Kumar Sharma***, 2010. Single-Pot Synthesis: Plant mediated Gold nanoparticles catalyzed reduction of Methylene Blue in presence of Stannous chloride. **Colloids and Surfaces A: Physicochemical and Engineering Aspects** 367, 102-107. (IF 5.518)
<http://www.sciencedirect.com/science/article/pii/S092777571000378X>

5 Anil Kumar Nain*, Dinesh Chand, **Rakesh Kumar Sharma**, 2009. Evaluation of Kirkwood-Buff integrals for 2,2,4-trimethylpentane + aromatic hydrocarbon binary mixtures from ultrasonic speed and density data using inversion procedure and regular solution theory. **J. Acoustical society of India**, 36, 152-162.

4 **Rakesh Kumar Sharma**, Inderjit Roy and Amarnath Maitra*, 2009. Glucose oxidase doped Silica nanoparticles shows significant enzymatic activity. **J. Sci. Conf. Proc.** 1, 48–53
<http://www.ingentaconnect.com/content/asp/jscp/2009/00000001/00000001/art00010?token=004818fc84e8c30b41333c4a2f7a3f6a532c2b464c7d7725704f6d4e22240bde264e410f>

3 **Rakesh Kumar Sharma**, Shraboni Das and Amarnath Maitra*, 2005. Enzymes in the cavity of hollow silica nanoparticles. **J. Colloid Interface Science** 284, 358-361. (IF 9.965)
<http://www.sciencedirect.com/science/article/pii/S0021979704010276>

2 **Rakesh Kumar Sharma**, Shraboni Das and Amarnath Maitra*, 2004. Surface Modified ORMOSIL nanoparticles. **J. Colloid Interface Science**, 277, 342–346. (IF 9.965)
<http://www.sciencedirect.com/science/article/pii/S0021979704003819>

1 **Rakesh Kumar Sharma**, Parvesh Sharma and Amarnath Maitra*, 2003. Size dependent catalytic behavior of Platinum nanoparticles on the Hexacyanoferrate/thiosulfate redox reaction.

J. Colloid Interface Science 265, 134-140. (IF 9.965)
<http://www.sciencedirect.com/science/article/pii/S0021979703004636>

Publications in the Last one year

1. Nikesh Gupta, **Rakesh Kumar Sharma**, Amarnath Maitra, Anju Shrivastava (2023). In-vitro and in-vivo efficacy of hollow gold nanoparticles encapsulating horseradish peroxidase: Oxidative stress-mediated tumor cell killing. **Journal of Drug Delivery Science and Technology** 79, 103979 (I.F. 5.062).
<https://www.sciencedirect.com/science/article/pii/S1773224722008905>

2 Anu Sharma Parul Mittal, Anita Yadav, Anil K Mishra, Puja Panwar Hazari* **Rakesh Kumar Sharma*** Sustained Activity of Stimuli-Responsive Curcumin and Acemannan Based Hydrogel Patches in Wound Healing. *ACS Appl. Bio Mater.* 2022, 5, 2, 598–609 (I.F. 3.25).
<https://pubs.acs.org/doi/10.1021/acsabm.1c01078>

3 Anu Sharma, Abhishek Kumar, Changning Li, Puja Panwar Hazari, Supriya Mahajan,* Ravi kumar Aalinkeel,* **Rakesh Kumar Sharma***, Mark T. Swihart* (2021) A cannabidiol-loaded Mg-gallate metal–organicframework-based potential therapeutic for glioblastomas. **J. Mater. Chem. B.** 9, 2505-2514 (I.F. 7.571)
<https://pubs.rsc.org/en/content/articlelanding/2021/tb/d0tb02780d#!divAbstract>

Conference Organization/ Presentations (in the last three years)

1 Refresher Course in Chemistry (**Resource person**) Nanoscale materials: Small size-potential applications. Jammu University. February 6, 2023.

2 Expert group meeting on nanomedicine. (**Presentation**) central council for research in homoeopathy. (An Autonomous Body of ministry of Ayush, Govt. of India). Nehru Bhartiya Chikitsa Avum Homoeoparhv Anusandhan Bhavan Janak Puri Delhi. February 2, 2023

3. International conference on **Nanomedicines: Chemistry Medicine Interface (NCMI-2022)** **Convener-** Department of Chemistry. University of Delhi Delhi-7 India. December 6, 2022.

4 International Conference on Green Technology: Issues and Challenges (ICGT 2022) **Invited Talk** Some potential applications of nanoscale materials. Department of Chemistry, C.C.S. University, Meerut. September 23, 2022

5. Online faculty development program. (**Resource Person**). Nanomaterials: Small size-Better properties. Department of chemistry, GLA University, Mathura from 17th Oct. to 22 Oct. 2022.

6 Online faculty development program. (**Resource person**). Synthesis characterization and biomedical applications of some inorganic nanoscale materials. Department of chemistry, GLA University, Mathura from 27th Sept. to 01 Oct. 2021)

7 Biomedical applications of some nanoscale materials. **Invited talk**-Chemistry Association. Dayal Singh College- Karnal. Haryana. February 8, 2021

8 Microemulsion Mediated Synthesis of Some Inorganic Nanomaterials for Biomedical Applications. **Invited talk** - INDO-GERMAN WORKSHOP - 2019 Multivalent Macromolecular Architectures for Biomedical Applications. Department of Chemistry, University of Delhi April 5-6, 2019.

9 Nanoscale materials for potential Biomedical applications. **Resource person** in XXX-Quality Improvement programme (25-29th March 2019) DIPSAR (Govt of NCT of Delhi).

10 Micro-emulsion mediated synthesis of nanoparticles for therapeutic applications. **Resource person** in XXIV-Quality Improvement programme (19-23 Feb. 2018), DIPSAR (Govt of NCT of Delhi)

Research Projects (Major Grants/Research Collaboration)

- Development of dye doped gadolinium oxide nanoparticles for bioimaging applications sponsored by Council of scientific and industrial research (CSIR)-(Completed)
- Hollow silica nanoparticles entrapping enzyme for possible enzyme therapeutics and sensor applications' sponsored by University Grant commission (UGC) Government of India - (Completed)
- DU R & D Grants (Minor projects)

Awards and Distinctions

- **Raman post doctoral fellowship to USA** from University Grant Commission (UGC), Government of India, October 1, 2016 –September 30, 2017.
- **Senior Research Fellowship (SRF)** from The Department of Science and Technology, Government of India, New Delhi, India, January 2004 – March 2005.
- **Junior Research Fellowship (JRF)** from The Department of Science and Technology, Government of India, New Delhi, India, January 2002 - January 2004

Association With Professional Bodies

Life member of Nanoscience and nanotechnology society

Other Activities

Book Chapters

1 Anand Prakash and **Rakesh Kumar Sharma**. Metal–Organic Frameworks as Promising Catalysts for CO₂ Capture and Fixation. Book is METAL-ORGANIC FRAMEWORKS (MOFS) AS CATALYSTS. Springer Nature

2 Anita Yadav and **Rakesh Kumar Sharma**. Metal organic framework a photocatalyst: Recent growth in environment applications. Book is METAL-ORGANIC FRAMEWORKS (MOFS) AS CATALYSTS Springer Nature

3 Mathieu Abou-Jaoude, **Rakesh Kumar Sharma**, Aditya Nair, Manoj J. Mammen, Ravikumar Aalinkeel, Stanley A. Schwartz, and Supriya D. Mahajan. Nanotherapy approach to target ZIKA virus in microglia: A case study. Book is Nanotechnological applications in virology P- 113-128

Head of the department

Signature of Faculty Member

- You are also requested to also give your complete resume as a DOC or PDF file to be attached as a link on your faculty page.