

# PROF. R. K. SHARMA



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## Education Qualifications

- **Ph.D.**, Chemistry Department, University of Delhi, Delhi, India, **1986**
- **M.Phil.**, Chemistry Department, University of Delhi, Delhi, India, **1982**

## Career Profile

Organization	Designation	Duration	Role
Kumamoto University Japan & Institute of Medical Science University of Tokyo Japan	Japan Society for Promotion of Science (JSPS) Post-Doctoral Fellow	1998 2002	Research
University of Delhi	Reader	Oct 2004-Oct 2005	Research and Teaching
University of Delhi	Professor	26 <sup>th</sup> Oct 2005-contd.	Research and Teaching
Deakin University, Australia	Honorary Professor	2019	Research and Teaching

## Administrative Assignments

- Provost GWYER HALL, University of Delhi
- Convener Inorganic Section
- Convener, Undergraduate Examination, University of Delhi
- Convener, Revising Syllabus of Undergraduate courses of Chemistry, University of Delhi based on LOCF
- Secretary Staff Council
- Acted as a Member of various committees of the Department e.g. Bill Committee, Purchase Committee etc.

## Areas of Interest / Specialization

- Green Chemistry
- Development of Green Analytical Methods
- Development of functionalized silica gel for their applications as scavengers, sensors and catalysts.
- Chemical Speciation and Molecular Modeling Studies for Designing of novel metal-chelating inhibitors of transcription factor NF- $\kappa$ B-DNA binding.

- Clean Oxidation Process.
- Designing and Synthesis of Magnetite ( $\text{Fe}_3\text{O}_4$ ) Silica Based Organic-Inorganic Hybrid Nanocatalysts.

## Subjects Taught

More than twenty five years teaching experience of Post-graduate Classes

Courses taught:

- Bio-inorganic Chemistry
- Complexation in Analytical Chemistry
- Group Theory
- Metal ion Catalyzed Organic reactions
- Organometallic Chemistry
- d- & f- Block Metal Ions

## Research Guidance

1. Supervision of awarded Doctoral Thesis - 28 (Twenty-Eight)

1. **Sherly Joseph, 1998**, Investigation on the Chelation Behaviour of anti-AIDS Chelators, **University of Delhi.**
2. **Sachin Mittal, 2000**, Designing, Synthesis and Use of Chelating Resins for Separation and Preconcentration of Trace Metal Ions and their Uses in the Estimation of Metal Ions in Various Samples, **University of Delhi**
3. **Aparna Rathi, 2001**, Studies on Advanced Oxidation Process for Photo degradation of Azo Dyes, **University of Delhi.**
4. **Shallu Sachdeva, 2002**, Metal Ions-7,8-Dihydroxy-4-methyl Coumarin Antioxidant Interactions: Studies based on Chemical Speciation, Stability Constants and Molecular Modelling, **University of Delhi.**
5. **S. Mary Celin Sandana, 2003**, Studies on Photodegradation of Nitro-Organic Explosives in aqueous phase, **University of Delhi.**
6. **Ashu Goel, 2004**, Designing and Synthesis of Functionalized Polymers for Preconcentration and Determination of Trace Metal Ions: A Green Chemistry Approach, **University of Delhi.**
7. **Shilpa Chopra, 2005**, Studies on the Interaction of Metal Ions with Potential NF- $\kappa$ B-DNA Binding Inhibitors, **University of Delhi.**

8. **Rajeev Goel, 2006**, Studies on Arsenic Remediation and Development of Arsenic Removal Kit Utilizing Various Adsorbents, **University of Delhi.**
9. **Hament K. Rajor, 2007**, Chemical Speciation, Molecular Modeling and Antioxidant Activity Studies on Polyhydroxyphenols and their Metal Complexes, **University of Delhi.**
10. **Shuchi Dhingra, 2009**, Designing and Synthesis of Functionalized Silica Gels and their Applications as Metal Scavengers, Sensors and Catalysts: A Green Chemistry Approach, **University of Delhi.**
11. **Parul Pant, 2010**, Synthesis, Characterization and Applications of Functionalized Amberlite XAD-16 in Metal Ion Extraction and Catalysis, **University of Delhi.**
12. **Chetna Sharma, 2011**, Synthesis, Characterization and Applications of silica immobilized Metal Complexes as Sustainable Heterogeneous Catalysts for Oxidative Bromination, Esterification and Condensation Reactions, **University of Delhi.**
13. **Deepti Rawat, 2012**, Synthesis, Characterization and Applications of Silica Supported Metal Catalysts for Transesterification, Acetylation and Multicomponent Reactions, **University of Delhi.**
14. **Amit Pandey, 2013**, Synthesis, Characterization and Applications of Silica Based Organic-Inorganic Hybrid Materials as Chelating Resins for Metal Ion Extraction and Catalysts for Various Organic Transformations, **University of Delhi.**
15. **Shikha Gulati, 2013**, Synthesis, Characterization and Investigation of Catalytic activity of Metallophthalocyanines anchored on Silica gel for various Organic Transformations, **University of Delhi.**
16. **Garima Gaba, 2014**, Studies on the interaction of metal ions with curcumin and its analogues: NF- $\kappa$ B-DNA binding inhibitors, **University of Delhi.**
17. **Anil Kumar Kalotra, 2015**, Synthesis, Characterization and Applications of Functionalized Silica Gel as Efficient Sorbent for the Selective Extraction and Determination of Cr(III), Cu(II), Ni(II) and Mo(VI) Ions, **University of Delhi.**
18. **Aditi Puri, 2015**, Synthesis, Characterization and Applications of Functionalized Silica for Selective and Cyclic Recovery of Zn(II), Cu(II), Cd(II) and Pb(II), **University of Delhi.**
19. **Yukti Monga, 2015**, Synthesis and characterization of silica-magnetite based organic-inorganic hybrid nanocatalysts for various organic transformations, **University of Delhi.**

20. **Shivani Sharma, 2016**, Design, Synthesis and Application of Silica Nanospheres based Organic-Inorganic Hybrid Materials as Sensor for Copper ions and Catalysts for Oxidative Amination and Coupling reactions, **University of Delhi**.
21. **Manavi Yadav, 2016**, Design, Synthesis and Application of Nano Magnetic Silica supported Transition Metal Catalysts for Cross-Coupling and Oxidation Reactions, **University of Delhi**.
22. **Sriparna Dutta, 2019**, Fabrication of sustainable magnetically retrievable core-shell nanocatalysts and their applications in industrially significant C-H activation, tandem oxidative cyclization, reductive amination and enamination reactions, **University of Delhi**.
23. **Rashmi Gaur, 2019**, Designing, Characterization and Application of Magnetically Retrievable Transition Metal Nanocatalysts for CO<sub>2</sub> Fixation and Other Organic Transformations, **University of Delhi**.
24. **Radhika Gupta, 2020**, Design, Synthesis and Application of Recyclable Ionic Liquids Supported Silica-Based Magnetic Nanocatalysts for Various Organic Transformations, **University of Delhi**.
25. **Aditi Sharma, 2020**, Unlocking High Catalytic Performance of Nanostructured Graphene Oxide and Cobalt Oxide Based Materials for Amidation, C-H Activation, Cyclization and Condensation Reactions, **University of Delhi**.
26. **Gunjan Arora, 2021**, Functionalized Hollow Magnetic Materials as Nanoreactors: Fabrication and Catalytic Applications in C-S, Cross-Coupling, Halogenation and Multi-Component Reactions, **University of Delhi**.
27. **Sneha Yadav, 2021**, Unraveling the Potency of Magnetically Responsive Metal Organic Framework Composites: Designing, Fabrication, Characterization and Catalytic Applications in C-H Activation, Multicomponent Click Coupling and Condensation Reactions, **University of Delhi**.
28. **Pooja Rana, 2022**, Visible Light Mediated Cross Dehydrogenative Coupling, C-H Arylation, Cyanation and CO<sub>2</sub> capture via the Design and Development of Surface Engineered Nanosized Photocatalysts, **University of Delhi**.

2. Supervision of Doctoral Thesis, under progress - 8 (Eight)

3. Supervision of awarded M. Phil dissertations - 15 (Fifteen)

- ❖ **Sherly Joseph, 1994**, Metal-Tetracycline and Metal-Nalidixic Acid Interaction: Formation Constant, Chemical Speciation and Molecular Modelling Studies.
- ❖ **Parul, 1999**, Solid Phase Extraction and Estimation of Cadmium Using Glycine Immobilized Cellulose Chelating Resin.
- ❖ **Deepti Goel, 1999**, Metal-Cephalothin Interaction: Formation Constant, Lipophilicity Measurement, Chemical Speciation and Molecular Modelling Studies.
- ❖ **Reena Shrestha, 1999**, Metal-Pyridylcarboxypropanamide and Metal-Pyridylcarboxybenzamide Interactions: Stability Constant, Chemical Speciation and Molecular Modelling Studies.
- ❖ **Shilpa Chopra, 2000**, Chemical Speciation and Molecular Modeling Studies on Interaction of Metal Ions with a Quinolone Drug Analogue.
- ❖ **Hament K. Rajor, 2001**, Formation Constants, Chemical Speciation and Molecular Modeling Studies on Complexation Behaviour of Gallic Acid with Metal Ions present in Biological System.
- ❖ **Satyakam Patnaik, 2002**, Interaction of Metal Ions with Ciprofloxacin: Studies Based on Chemical Speciation and Molecular Modeling.
- ❖ **Chandan K. Singh, 2003**, Chemical Speciation and Molecular Modeling Studies on Complexation Behaviour of 5,7-Dihydroxy-4-Methyl Coumarin with Metal Ions Present in Biological System.
- ❖ **C. Chelladurai, 2005**, Synthesis, Spectroscopic and Molecular Modelling Studies on Ln(III)-Chrysin Complex.
- ❖ **Vineet Dua, 2006**, Designing and Synthesis of Aurin Tricarboxylic Acid Immobilized Silica Gel for Selective Determination of Al(III).
- ❖ **Deepti Rawat, 2006**, Synthesis and Characterization of Surface Modified Silica Supported Zn(II)Schiff Base Complex for use as Catalyst in Transesterification Reaction.
- ❖ **A.D. Tiwari, 2007**, Studies on Inhibition Mechanism of transcription factor NF- $\kappa$ B-DNA binding by Pyrogallol red on the basis of their interaction with metal ions.
- ❖ **Gauri Ahuja, 2008**, Solventless Synthesis of Porphyrins and One Pot Synthesis of Nickel Porphyrin.

- ❖ **Kanika Sharma, 2009**, Solventless One-Pot Synthesis of Cobalt and Copper Carboxamide Phthalocyanine Complexes.
- ❖ **Seema Gautam, 2010**, Synthesis and Application of 2,2'-Dipyridyl Ketone (DPK) Immobilized Silica Gel for Analysis of Copper (II) Metal Ion.

## Publication Profile

### 1. Books/Monographs (Authored/Edited)

- Edited and authored a book entitled “Green Chemistry for Beginners” published by Stanford Publications, 2021, ISBN 9789814316965.
- Edited and authored a book entitled “An Introductory Text on Green Chemistry” published by Wiley Publications, 2020, ISBN: 978-81-265-5407-2.
- Edited and authored a book entitled “Silica based Organic-Inorganic Hybrid Materials: Application in the field of catalysis” published by World Scientific Publishing Europe Ltd, Sustainable Chemistry Series, 2020, Vol. 4, ISSN: 2514-3042.
- Edited and authored a book entitled “Hazardous Reagent Substitution: A Pharmaceutical Perspective” published by Royal Society of Chemistry, Green Chemistry Series, 2017, ISBN-978-1-78262-050-1.
- Content Editor of Environmental Chemistry Module (MEV-13) published by Indira Gandhi National Open University, 2021, ISBN: 978-93-90773-59-6.
- R.K. Sharma, I.T. Sidhwani and M.K. Chaudhuri, 2012, Green Chemistry Experiment: A monograph I.K. International Publishing House Pvt. Ltd. New Delhi. (ISBN 978-93-81141-55-7).
- R.K. Sharma and S. Dhingra, 2011, Functionalized silica gel as metal scavenger, sensor and catalyst LAP Lambert academic, publishing GmbH & Co, ISBN 978-3-8443-1991-0.
- M.K. Chaudhuri, R.K. Sharma, and A. Sharma, 2006, Edited collection of Green Chemistry articles written by World leaders in Green Chemistry from US and India in the form of a book as Proceedings of the Indo-US S & T Forum workshop on Green Chemistry published by NISCAIR (CSIR) and also written an article on Phyto-extraction of Heavy metals.  
[www.niscair.res.in/sciencecommunication/ScholarlyBooks/scholarlybooks.htm](http://www.niscair.res.in/sciencecommunication/ScholarlyBooks/scholarlybooks.htm)
- Author of Bio-inorganic Chemistry E-book Module for National Science Digital Library (NSDL), a X Five Year Plan Network Project of the CSIR with the active collaboration of UGC, MHRD.  
<http://nsdl.niscair.res.in/>
- Prepared a monograph on Green Chemistry Experiments for undergraduate and postgraduate courses as a member of DST Green Chemistry monograph committee constituted by DST Green Chemistry Task Force.

<http://dst.gov.in/green-chem.pdf>

## 2. Book Chapters

- Anju Srivastava, Sriparna Dutta, Satinder Ahuja, and R. K. Sharma, Green chemistry: key to reducing waste and improving water quality, In *Handbook of Water Purity and Quality*, 2021, 359-407.
- Manavi Yadav, Radhika Gupta, Gunjan Arora, Priya Yadav, Anju Srivastava and R. K. Sharma, Current Status of Heavy Metal Contaminants and Their Removal/Recovery Techniques. In *Contaminants in Our Water: Identification and Remediation Methods*, 2020, 41-64. American Chemical Society.
- Sriparna Dutta and R. K. Sharma, Chapter 15, Sustainable Magnetically Retrievable Nanoadsorbents for Selective Removal of Heavy Metal Ions From Different Charged Wastewaters, In *Separation Science and Technology*, 2019, 11, 371-416, Academic Press.
- R. K. Sharma, Sneha Yadav and Sriparna Dutta, Gold Nanoparticles by Green Chemistry. In *21st Century Nanoscience—A Handbook*, 2019, 10-1, CRC Press.
- R. K. Sharma, Bhavya Arora, Sriparna Dutta and M. B. Gawande, Photo-oxidation Technologies for Advanced Water Treatment. In *Advanced Nano-Bio Technologies for Water and Soil Treatment*, 2020, 221-255, Springer, Cham.
- Manavi Yadav, Radhika Gupta and R. K. Sharma, Green and sustainable pathways for wastewater purification, In *Advances in water purification techniques: meeting the needs of developed and developing countries*, 2019, 355-383, Elsevier Publications.
- Shivani Sharma, Sriparna Dutta and R. K. Sharma, Chapter 2, Recyclability of Reagents, In *Hazardous Reagent Substitution*, 2017, 18-52, <http://dx.doi.org/10.1039/9781782623847-00018>. Edited by: Rakesh Kumar Sharma, Rakeshwar Bandichhor.
- Manavi Yadav, Sriparna Dutta and R. K. Sharma, Chapter 8, New Directions from Academia, In *Hazardous Reagent Substitution*, 2017, 130-167, <http://dx.doi.org/10.1039/9781782623847-00130>. Edited by: Rakesh Kumar Sharma, Rakeshwar Bandichhor.
- R. K. Sharma, Manavi Yadav and Manoj B. Gawande, Chapter 1, Silica-Coated Magnetic Nano-Particles: Application in Catalysis, 2016, pp 1-38, Ferrites and Ferrates: Chemistry and Applications in Sustainable Energy and Environmental Remediation, Edited By: Virender K. Sharma, Ruey-an Doong, Hyunook Kim, Rajender S. Varma, Dionysios D. Dionysiou.
- R. K. Sharma, Manavi Yadav and Radhika Gupta, Chapter 5, Water Quality and Sustainability in India: Challenges and Opportunities, 2016, pp 183-206, Chemistry and Water, Edited By: Satinder Ahuja.



- R.K. Sharma, Shikha Gulati and Aditi Puri, Chapter 3, Green Chemistry Solutions to Water Pollution, 2014, pp 57-75, Elsevier Publications, Water Reclamation and Sustainability, Edited By: Satinder Ahuja.
- R.K. Sharma and Shikha Gulati, Chapter 3, Water Quality Issues and Solutions in India, vol. 1, 2014, pp 21-39, Elsevier Publications, Comprehensive Water Quality and Purification, Edited By: Satinder Ahuja.
- R.K. Sharma, Garima Gaba, Anil Kumar and Aditi Puri, Chapter 6, Functionalized silica gel as green material for metal remediation, 2013, pp 105-134, RSC Publications, Green Materials for Sustainable Water Remediation and Treatment, Edited By: James H Clark.
- R.K. Sharma, Alok Adholeya, Manab Das and Aditi Puri, Chapter 2, Green materials for sustainable remediation of metals in water, 2013, pp 11-29, RSC Publications, Green Materials for Sustainable Water Remediation and Treatment, Edited By: James H Clark.
- R.K. Sharma, A. Adholeya, A. Puri and M. Das, Biomass Conversion: The Interface of Biotechnology, Chemistry and Materials Science, 2012, Chapter 14, Bioextraction: The Interface of Biotechnology and Green Chemistry, pp 435-456. Springer-Verlag, Heidelberg New York Dordrecht London.
- R.K. Sharma, 2005, "Photo-degradation of organic pollutants" in the book "Trends in Water Pollution Research" published by Nova Science Publishers, Inc. NY USA (2005). [http://novapublishers.com/catalog/product\\_info.php?products\\_id=1925](http://novapublishers.com/catalog/product_info.php?products_id=1925)

### 3. Complete list of Research papers published in Refereed/Peer Reviewed Journals

.....(Year 2022).....

1. B. Kaushik, S. Yadav, P. Rana, P. Rana, K. Solanki, D. Rawat & R.K. Sharma, Precisely Engineered Type II ZnO-CuS based Heterostructure: A Visible Light Driven Photocatalyst for Efficient Mineralization of Organic Dyes. **Applied Surface Science**, 2022, 590, 153053.  
**Impact Factor: 6.707**
2. P. Yadav, R. Gupta, G. Arora, A. Srivastava & R.K. Sharma, Synthesis of phenol esters by direct CH activation of aldehydes using highly efficient and reusable copper immobilized polyimide covalent organic framework (Cu@ PI-COF). **New Journal of Chemistry**, 2022, 46, 4715-4723.  
**Impact Factor: 3.591**
3. B. Arora, S. Sharma, S. Dutta, A. Sharma, S. Yadav, P. Rana, P. Rana, & R.K. Sharma, A sustainable gateway to access 1, 8-dioxo-octahydroxanthene scaffolds via surface engineered halloysite based magnetically responsive catalyst. **New Journal of Chemistry**, 2022, 46, 5405-5418.  
**Impact Factor: 3.591**



4. P. Rana, B. Kaushik, R. Gaur, S. Dutta, S. Yadav, P. Rana, K. Solanki, B. Arora, A. Biradar, M. B. Gawande, and **R. K. Sharma**. Earth-Abundant Cobalt based photocatalyst: Visible light induced direct (Het) Arene CH arylation and CO<sub>2</sub> capture. **Dalton Transactions**, 2022, 51, 2452-2463.

**Impact Factor: 4.39**

5. P. Yadav, M. Yadav, R. Gaur, R. Gupta, G. Arora, A. Srivastava, A. Goswami, M. B. Gawande, and **R. K. Sharma**. Chemistry of magnetic covalent organic frameworks (MagCOFs): From synthesis to separation applications. **Materials Advances**, 2022, 3, 1432-1458.

6. **R. K. Sharma**, B. Kaushik, S. Yadav, P. Rana, P. Rana, K. Solanki and D. Rawat, Ingeniously designed Silica nanostructures as an exceptional support: Opportunities, potential challenges and future prospects for viable degradation of pesticides, **Journal of Environmental Management**, 2022, 301, 113821.

**Impact Factor: 6.789**

.....(Year 2021).....

7. **R. K. Sharma**, S. Yadav, S. Dutta, H. B. Kale, I. R. Warkad, R. Zbořil, R. S. Varma and M. B. Gawande, Silver nanomaterials: synthesis and (electro/photo) catalytic applications, **Chemical Society Reviews**, 2021, 50, 11293-11380.

**Impact Factor: 54.564**

8. S. Yadav, R. Dixit, S. Sharma, S. Dutta, B. Arora, P. Rana, B. Kaushik, P. Rana, A. Adholeya, M. B. Gawande and **R. K. Sharma**, Unlocking the catalytic potency of a magnetic responsive CoFe<sub>2</sub>O<sub>4</sub>/Ni-BTC MOF composite for the sustainable synthesis of tri and tetra-substituted imidazoles, **Materials Chemistry Frontiers**, 2021, 5, 7343-7355.

**Impact Factor: 6.482**

9. P. Rana, R. Dixit, S. Sharma, S. Dutta, S. Yadav, A. Sharma, B. Kaushik, P. Rana, A. Adholeya, and **R. K. Sharma**. Enhanced Catalysis through Structurally Modified Hybrid 2-D Boron Nitride Nanosheets Comprising of Complexed 2-hydroxy-4-methoxybenzophenone Motif. **Scientific Reports**, 2021, 11:24429.

**Impact Factor: 4.379**

10. P. Rana, R. Gaur, B. Kaushik, P. Rana, S. Yadav, P. Yadav, P. Sharma, M. B. Gawande and **R. K. Sharma**, Surface engineered Iridium-based magnetic photocatalyst paving a path

towards visible light driven C-H arylation and cyanation reaction, **Journal of Catalysis**, 2021, **401**, 297-308.

**Impact Factor: 7.92**

11. G. Arora, M. Yadav, R. Gaur, R. Gupta, P. Yadav, R. Dixit and **R. K. Sharma**, Fabrication, Functionalization and Advanced Applications of Magnetic Hollow Materials in Confined Catalysis and Environmental Remediation. **Nanoscale**, 2021, **13**, 10967-11003.

**Impact Factor: 7.79**

12. **R. K. Sharma**, K. Solanki, R. Dixit, S. Sharma and S. Dutta, Nanoengineered Iron Oxide Based Sorbents for Separation of Various Water Pollutants: Current Status, Opportunities and Future Outlook, **Environmental Science: Water Research and Technology**, 2021, **7**, 818-860.

**Impact Factor: 4.251**

13. S. Yadav, R. Dixit, S. Sharma, S. Dutta, K. Solanki and **R. K. Sharma**, Magnetic Metal Organic Framework Composites: Structurally Advanced Catalytic Materials for Organic Transformations, **Materials Advances**, 2021, **2**, 2153-2187.

14. A. Sharma, R. Dixit, S. Sharma, S. Dutta, S. Yadav, B. Arora and **R. K. Sharma**, Efficient and sustainable  $\text{Co}_3\text{O}_4$  nanocages based nickel catalyst: A suitable platform for the synthesis of quinoxaline derivatives. **Molecular Catalysis**, 2021, **504**, 111454.

**Impact Factor: 5.062**

15. R. Gupta, G. Arora, P. Yadav, R. Dixit, A. Srivastava and **R. K. Sharma**, A magnetically retrievable copper ionic liquid nanocatalyst for cyclooxidative synthesis of 2-phenylquinazolin-4(3H)-ones, **Dalton Transactions**, 2021, **50**, 890-898.

**Impact Factor: 4.39**

16. G. Arora, R. Gupta, P. Yadav, R. Dixit, A. Srivastava and **R. K. Sharma**, Ultrasonically-mediated one-pot synthesis of substituted imidazoles via sulfamic acid functionalized hollow magnetically retrievable solid-acid catalyst, **Current Research in Green and Sustainable Chemistry**, 2021, **4**, 100050-100057.

17. G. Arora, R. Shrivastava, P. Kumar, R. Bandichhor, D. Krishnamurthy, **R. K. Sharma** and M. Rizwan, Recent advances made in the synthesis of small drug molecules for clinical applications: An insight. **Current Research in Green and Sustainable Chemistry**, 2021, **4**, 100097.

.....(Year 2020).....

18. R. Gupta, M. Yadav, R. Gaur, G. Arora, P. Yadav and **R. K. Sharma**, Magnetically Supported Ionic Liquids: A Sustainable Catalytic Route for Organic Transformations, **Materials Horizons**, 2020, 7, 3097-3130.  
**Impact Factor: 13.266**
19. Y. Monga, P. Kumar, **R. K. Sharma**, J. Filip, R. S. Varma, R. Zbořil, M. B. Gawande, Sustainable Synthesis of Nanoscale Zerovalent Iron Particles for Environmental Remediation, **ChemSusChem**, 2020, 13, 3288-3305.  
**Impact Factor: 8.928**
20. S. Yadav, S. Sharma, S. Dutta, A. Sharma, A. Adholeya and **R. K. Sharma**, Harnessing the Untapped Catalytic Potential of a CoFe<sub>2</sub>O<sub>4</sub>/Mn-BDC Hybrid MOF Composite for Obtaining a Multitude of 1,4-Disubstituted 1,2,3-Triazole Scaffolds, **Inorganic Chemistry**, 2020, 59, 8334–8344.  
**Impact Factor: 5.165**
21. **R.K. Sharma**, B. Arora, S. Sharma, S. Dutta, A. Sharma, S. Yadav and K. Solanki, In-situ hydroxyl radical generation using the synergism of Co-Ni bimetallic centres of developed nanocatalyst with potent efficiency of degrading toxic water pollutants, **Materials Chemistry Frontiers**, 2020, 4, 605-620.  
**Impact Factor: 6.482**
22. **R.K. Sharma**, P. Yadav, M. Yadav, R. Gupta, P. Rana, A. Srivastava and M. B. Gawande, Recent development of covalent organic frameworks (COFs): synthesis and catalytic (organic-electro-photo) applications. **Materials Horizons**, 2020, 7, 411-454.  
**Impact Factor: 13.266**
23. G. Arora, M. Yadav, R. Gaur, R. Gupta, P. Rana, P. Yadav and **R.K. Sharma**, A template free protocol for fabrication of a Ni(II)-loaded magnetically separable nanoreactor scaffold for confined synthesis of unsymmetrical diaryl sulfides in water, **RSC Advances**, 2020, 10, 19390.  
**Impact Factor: 3.361**
24. P. Yadav, M. Yadav, R. Gaur, R. Gupta, G. Arora, P. Rana, A. Srivastava and **R. K. Sharma**, Fabrication of Copper-based Silica-coated Magnetic Nanocatalyst for Efficient One-pot Synthesis of Chalcones via A3 Coupling of Aldehydes-Alkynes-Amines, **ChemCatChem**, 2020, 12, 1–10.  
**Impact Factor: 5.686**

.....(Year 2019).....

25. **R.K. Sharma**, A. Sharma, S. Sharma, S. Dutta, S. Yadav and B. Arora, Design and Exploration of Catalytic Activity of Two-Dimensional Surface-Engineered Graphene Oxide Nanosheets in the Transannulation of N-Heterocyclic Aldehydes or Ketones with Alkylamines, **ACS Omega**, 2019, **4**, 3146-3158.

**Impact Factor: 3.512**

26. R. Gupta, M. Yadav, R. Gaur, G. Arora, P. Rana, P. Yadav and **R.K. Sharma**, Silica-Coated Magnetic-Nanoparticle-Supported DABCO-Derived Acidic Ionic Liquid for the Efficient Synthesis of Bioactive 3, 3-Di (indolyl) indolin-2-ones, **ACS Omega**, 2019, **4**, 21529–21539.

**Impact Factor: 3.512**

27. P. Rana, R. Gaur, R. Gupta, G. Arora, J. Anireddy and **R.K. Sharma**, Cross-dehydrogenative C(sp<sup>3</sup>)-C(sp<sup>3</sup>) coupling via C-H activation using magnetically retrievable ruthenium-based photoredox nanocatalyst under aerobic conditions, **Chemical Communications**, 2019, **55**, 7402-7405.

**Impact Factor: 6.222**

28. **R.K. Sharma**, S. Yadav, R. Gupta and G. Arora, Synthesis of Magnetic Nanoparticles Using Potato Extract for Dye Degradation: A Green Chemistry Experiment, **Journal of Chemical Education**, 2019, 96(12), 3038–3044.

**Impact Factor: 2.979**

.....(Year 2018).....

29. **R.K. Sharma**, S. Yadav, S. Sharma, S. Dutta and A. Sharma, Expanding the Horizon of Multicomponent Oxidative Coupling Reaction via the Design of a Unique, 3D Copper Isophthalate MOF-Based Catalyst Decorated with Mixed Spinel CoFe<sub>2</sub>O<sub>4</sub> Nanoparticles, **ACS Omega**, 2018, 3(11), 15100-15111.

**Impact Factor: 3.512**

30. **R.K. Sharma**, A. Sharma, S. Sharma and S. Dutta, Unprecedented Ester–Amide Exchange Reaction Using Highly Versatile Two-Dimensional Graphene Oxide Supported Base Metal Nanocatalyst, **Industrial & Engineering Chemistry Research**, 2018, 57(10), 3617-3627.

**Impact Factor: 3.720**

31. R. Gaur, M. Yadav, R. Gupta, G. Arora, P. Rana and **R.K. Sharma**, Aerobic Oxidation of Thiols to Disulfides by Silver-Based Magnetic Catalyst. **Chemistry Select**, 2018, 3(9), 2502-2508.

**Impact Factor: 2.109**

32. **R.K. Sharma**, R. Gaur, M. Yadav, A. Goswami, R. Zbořil and M. B. Gawande, An efficient copper-based magnetic nanocatalyst for the fixation of carbon dioxide at atmospheric pressure, **Scientific reports**, 2018, 8(1), 1901.

**Impact Factor: 4.379**

.....(Year 2017).....

33. G. Arora, M. Yadav, R. Gaur, R. Gupta and **R.K. Sharma**, A Novel and Template-Free Synthesis of Multifunctional Double-Shelled Fe<sub>3</sub>O<sub>4</sub>-C Nanoreactor as an Ideal Support for Confined Catalytic Reactions, **Chemistry Select**, 2017, 2, 10871-10879.

**Impact Factor: 2.109**

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## Conference Organization/ Presentations

*Working for the popularization of Green Chemistry in India. Following are the workshops organized and lectures delivered for the incorporation of Green Chemistry Principles in the laboratories of Universities and industries:*

### *Workshops/ Conferences organized*

1. First **National Symposium on Green Chemistry** held on 11-13 January **1999** at Department of Chemistry, University of Delhi.
2. **IUPAC International Symposium on Green Chemistry** on 10-13 January **2001** at Department of Chemistry, University of Delhi.
3. **INDO-US Workshop on Green Chemistry** in November **2003** under INDO-US S & T Forum at Department of Chemistry, University of Delhi.
4. ACS sponsored Second **INDO-US Workshop on Green Chemistry** in January **2006**

5. DST sponsored [Green Chemistry Education Workshop](#) in March **2007**
6. [Third Indo-US S & T Forum Workshop on Green Chemistry](#) in January **2008**
7. DST, University of Delhi and RSC (London) sponsored [Workshop on Green Chemistry in Real World Practice](#) in May **2009**
8. [Industrial Green Chemistry International Workshop](#) at Mumbai in December **2009**
9. RSC London Sponsored [Training Workshop on Green Chemistry Education : Necessity of a Sustainable Future](#) in November **2010**
10. ACS-Gii Sponsored [International Workshop on Sustainability and Water Quality](#) in January **2011**
11. UCOST (Govt. of Uttarakhand) Sponsored [Workshop on Green Chemistry Education : Necessity of a Sustainable Future](#) at HNB Garhwal University Srinagar Uttarakhand in March **2011**
12. Royal Society of Chemistry London sponsored [meeting of all the Indian local Sections](#) (June 25, **2011**) at University of Delhi.
13. RSC London and Vigyan Prasar (Govt of India) Sponsored [Training Workshop on Green Chemistry: Chemistry for Tomorrow's World](#) in December 26, **2011** at University of Delhi
14. [International Conference on Green Chemistry](#) (7-9 December **2011**) jointly organized with Central University of Rajasthan at Jaipur
15. [International Workshop on Chemistry for a Sustainable Future](#) (10-12 December **2012**) organized jointly with MNIT Jaipur and Jaipur University at Chokhi Dhani Resort Jaipur
16. [International Workshop on Introduction to Gaussian: Theory and Practice](#) organized by Green Chemistry Network Centre (17-21 December **2012**) at Delhi.
17. [International Workshop on Green Initiatives in Energy, Environment & Health](#) (2-3 December, **2013**) jointly organized with GCCE, TERI & GBU at Hotel Maidens, Delhi.
18. ACS-Gii sponsored [Second International Workshop on Sustainability and Water Quality \(IWSWQ\) Remediation of Pesticides and Metals Contamination](#) (15-18 January **2014**) jointly organized with TERI at Hotel Maidens, Delhi.



19. The Energy and Resources Institute (TERI) and Green Chemistry Network Centre (GCNC) jointly organized the 5th Asia-Oceania Conference on Green & Sustainable Chemistry (5th AOC-GSC) on January 15-17, 2015 at New Delhi, India
20. RSC ChemCareers jointly organized with Hindu College, University of Delhi and RSC North India Section at Hindu College, University of Delhi on 8th August 2015. Professor R K Sharma chaired the inaugural session and delivered a talk.
21. Second National workshop on “Innovative Lab Practices Through Green Chemistry” was jointly organized by GCNC Kanpur CSJM University of Kanpur and Royal Society of Chemistry North India Section on 9<sup>th</sup> September 2015.
22. International Workshop on “Chemistry for Tomorrow’s World” sponsored by Royal Society of Chemistry London (North India Section) was jointly organized by Green Chemistry Network Centre, University of Delhi, Manav Rachna University, Faridabad, Shiv Nadar University, Greater Noida on 2-3<sup>rd</sup> December 2015.
23. National Workshop on “Green Chemistry and Water Treatment” sponsored by Royal Society of Chemistry London (North India Section) jointly organized by Hindu College, University of Delhi & Green Chemistry Network Centre, University of Delhi on 17<sup>th</sup> October, 2016.
24. ChemCareers Delhi 2016 organized by RSC London North India Section and Green Chemistry Network centre, University of Delhi on 24<sup>th</sup> September 2016.
25. “National conference and workshop on Green Chemistry: Teaching and Technology” organized by Faculty of Science, Mohanlal Sukhadia University in association with Royal Society of Chemistry London North India Section on 20<sup>th</sup> October, 2016.
26. “Yusuf Hamied Inspirational Chemistry Programme” organized by Gargi College and sponsored by Royal Society of Chemistry on 24<sup>th</sup>-25<sup>th</sup> October, 2016.
27. “Indo-UK Scoping Meeting on Water Quality Research in India and UK” jointly organised by Department of Science and Technology (GOI), the UK Natural Environment Research Council (NERC) and Engineering and Physical Sciences Research Council (EPSRC) with support from RCUK India on 17<sup>th</sup>-18<sup>th</sup> November, 2016.
28. One day workshop on “Recent Advances in Chemistry and Biology” organized by Royal Society of Chemistry North India Section, Department of Chemistry, Shiv Nadar University & Green Chemistry Network Centre, University of Delhi 15<sup>th</sup> December, 2016.
29. “National conference on Environmental Sustainability in Wastewater Remediation: Current Status and Future Prospects” organized by Sri Venkateswara College and sponsored by Royal Society of Chemistry London North India Section on 20<sup>th</sup> January, 2017.

30. “Indo-UK Scoping Workshop On Development of Rural Biorefineries in India: From Waste to Wealth” organized by Green Chemistry Centre of Excellence, University of York, Green Chemistry Network Centre, University of Delhi and The Energy and Resources Institute (TERI) and sponsored by BBSRC Grand Challenges Research Fund on 20<sup>th</sup> February, **2017**.
31. International Conference on "Advancing Green Chemistry: Building a Sustainable Tomorrow" organized by Green Chemistry Network Centre, University of Delhi and Hindu College, Department of Chemistry, University of Delhi on 3-4 October **2017** at University Conference Centre, University of Delhi.
32. International Conference on Advances in Chemical Sciences and Allied Fields of Science, Health, Education & Environment organized by Career College Bhopal in association with Royal Society of Chemistry, London, North India Section held on 8th-10th March, **2018** at Career College Bhopal.
33. National Conference on Chemistry for Human Health and Environment (CHHE-2018) organized by Royal Society of Chemistry, London North India Section, Green Chemistry Network Centre, University of Delhi and National Environmental Science Academy (NESA), New Delhi held on 15-16<sup>th</sup> December, **2018** at Conference Center, University of Delhi.
34. National Conference on “Green Chemistry for Clean Environment (NCGCCE-2019) organized by Department of Chemistry J.R. N. Rajasthan Vidyapeeth Udaipur in association with Royal Society of Chemistry, London, North India Section and Green Chemistry Network Centre, University of Delhi on 27<sup>th</sup> July, **2019**.
35. National Conference on “Recent Trends in Chemical Sciences (RTCS-2019) and RSC Workshop on “Periodic Table: a boon for mankind” organized by Green Chemistry Network Centre, University of Delhi and Hindu College, Department of Chemistry, University of Delhi held between 30<sup>th</sup> August-1<sup>st</sup> September, **2019** at Hotel Maidens, Civil Lines.
36. Indo-UK workshop "Green Chemistry for Societal Needs: Healthcare, Pollution and Circular Economies" organized by Green Chemistry Network Centre, University of Delhi and Hindu College, Department of Chemistry, University of Delhi in association with Green Chemistry Centre for Excellence, UK between 16<sup>th</sup>-18<sup>th</sup> December, **2019** at Hotel Maidens, Civil Lines sponsored by British Council (Newton Bhabha Researcher funds).
37. ACS Workshop on Greening our Education System: Initiatives for Propagating and Preaching Beyond Benign Concepts in Classrooms and Laboratories organized by ACS International Student Chapter, University of Delhi, Green Chemistry Network Centre, University of Delhi and Hindu College on December 19, **2019** at Conference Centre, University of Delhi.
38. ChemCareers India-2020 online event organized by RSC London North India Section, Green Chemistry Network Centre, University of Delhi and Hindu College, Department of Chemistry, University of Delhi on 25th September **2020**.

39. National Seminar on “Women Empowerment through Science & Technology: Power to Transform the World” organized by RSC London North India Section, Green Chemistry Network Centre, University of Delhi and Hindu College, Department of Chemistry, University of Delhi on 25<sup>th</sup> September 2021.
40. Chemistry Festival for Students & Teachers: Green Chemistry, Education, Research & Practice organized by RSC London North India Section, Green Chemistry Network centre, University of Delhi and Hindu College, Department of Chemistry, University of Delhi on 1<sup>st</sup> October 2021.

*Delivered lectures & Participated:*

1. Delivered lecture in DST Green Chemistry Task Force Workshop at IIT Guwahati (25-26 February 2006)
2. Train the trainer workshop on Green Chemistry conducted by American Chemical Society’s Green Chemistry Institute held in June 30, 2006 at Washington DC USA.
3. Delivered lecture in Green Chemistry Symposium organized by Schools from Delhi and Gurgaon at DAV School Gurgaon (November 2006).
4. A green chemistry approach for the removal of heavy metal ions from industrial waste land Presented in 10<sup>th</sup> Annual Green Chemistry & Engineering Conference in Washington DC on 26-30<sup>th</sup> June 2006
5. Delivered lecture in DST Green Chemistry Task Force workshop at NEERI, Nagpur on February 13-14, 2007
  - a. .
6. Delivered lecture in DST Green Chemistry Task Force Sponsored Workshop at Cotton College Guwahati on April 1-4, 2007
7. Application of Chelating Resins as Metal Scavengers: A Green Chemistry Approach Presented in 11<sup>th</sup> Annual Green Chemistry & Engineering Conference in Washington DC on 26-29<sup>th</sup> June 2007
8. Preparation of Blue and Green luminescent tris (8-hydroxyquinolato) Al (III) complexes- an undergraduate experiment. Presented in 11<sup>th</sup> Annual Green Chemistry & Engineering Conference in Washington DC on 26-29<sup>th</sup> June 2007

9. Train the trainer workshop on Green Chemistry conducted by American Chemical Society's Green Chemistry Institute held in June 29, 2007 at Washington DC USA.
10. Delivered lecture in DST Green Chemistry Task Force workshop at NIPER (Mohali), on September 3-4, 2007
11. Delivered lecture in National Conference on Greener Aspect of Electrochemistry held at Jiwaji University Gwalior on December 7-9, 2007
12. Delivered lecture in National Symposium on Emerging Trends in Advanced Chemistry held at Jaipur University on March 8-10, 2008
13. Delivered Keynote address in UGC Sponsored National Seminar on Green Chemistry Education for a Sustainable Future of Humanity held at ADP College Nagaon on March 8-10, 2008.
14. Delivered lecture in National Conference on Recent Advances in Chemical Sciences held at Bikaner University on October 3-5, 2008
15. Invited to deliver a presentation on "Green Chemistry Networking in India" in 12<sup>th</sup> Annual Green Chemistry & Engineering Conference in Washington DC on 24-26<sup>th</sup> June 2008
16. Invited to deliver a presentation on "Green Chemistry Education: Facilitating transition to Green Technologies and Processes in India" in 13<sup>th</sup> Annual Green Chemistry & Engineering Conference in University of Maryland MD USA on 22-26<sup>th</sup> June 2009
17. Delivered lecture in National Symposium on Green Chemistry: Applications in Science & Engineering at Thapar University Patiala (5-6 February 2009)
18. Delivered lecture in DST Green Chemistry Task Force sponsored Workshop on Green Chemistry at JNTU Hyderabad (14-15 February 2009)
19. Delivered lecture in National Symposium on Emerging Trends in Chemical Analysis & Synthesis at Sant Longowal Institute of Engineering & Technology, Sangrur (12-13 March 2009)
20. Delivered opening lecture in Green Chemistry Education Train the Trainer Workshop at 13<sup>th</sup> ACS Green Chemistry & Engineering Conference held on 22-26 June 2009 at University of Maryland USA
21. Delivered lectures in Workshops and conferences organized by Catalysis Society MS University Baroda and Reliance Research Centre Vadodara (September, 2009).

22. Delivered Keynote address in **All India Seminar on Engineering Systems and Alternatives for Reduction of Greenhouse Gases** organized by Institution of Engineers Guwahati (October, **2009**)
23. Delivered lectures in **Workshop on Nano-materials and Technology in Chemistry & Green Chemistry** organized by Sikkim MIT (October, **2009**).
24. Delivered lecture in NOESIS 2009, **The Annual Science Association Festival of Sri Venkateswara College**, University of Delhi (November, **2009**)
25. Delivered lecture in **DST Green Chemistry Task Force Sponsored Green Chemistry Workshop** at Jaipur (December **2009**).
26. Delivered lecture in **National Workshop on Green Chemistry** organized by ANDNNM College CSJM University Kanpur (December **2009**)
27. Delivered lecture in **International Conference on Green Technologies for Greener Environment** organized by CCS University Meerut (January **2010**)
28. Delivered lecture in **National Conference on Green and Sustainable Chemistry** organized by BITS Pilani (February **2010**).
29. Delivered lecture in **All India Seminar on New Strategies for Reducing Carbon Foot Prints And Its Impact on Global Warming** organized by Rajasthan College of Engineering for Women Jaipur Rajasthan (August **2010**)
30. Delivered lecture in '**International Conference on Environmental Challenges - A Global Concern**' organized by Kanya Maha Vidyalaya, Jalandhar (Punjab) (October **2010**)
31. Delivered lecture on Green Chemistry in Education and Research in '**4<sup>th</sup> INDO-ITALIAN Seminar on Green Chemistry and Natural Products**' organized by Department of Chemistry, University of Delhi and Embassy of Italy, New Delhi (November **2010**)
32. Delivered two lectures in **Refresher Course** organized by **UGC-Academic Staff College**, Kumaun University, Nainital (December **2010**)
33. Delivered Lecture on Green Chemistry Education: Necessity of a Sustainable Future in **UGC sponsored Orientation Programme (OR64)** for College and University teachers at CPDHE University of Delhi (December **2010**)
34. Delivered Keynote Address in **National Conference on Role of Green Chemistry for Risk Free Environment** organized by Department of Chemistry, Poornima Group of Institutions Jaipur, Rajasthan (December **2010**)

35. Delivered Keynote Address in **National Seminar on New Trends in Green Chemistry** organized by D.A-V. College, KANPUR (December **2010**)
36. Delivered lecture in the inaugural session of **National Conference On Green Chemistry: “An approach to meet the challenges of sustainability”** organized by Department of Chemistry, MMH College, Ghaziabad (January **2011**)
37. Delivered Lecture on Green Chemistry in Education and Research in **National Workshop on Renewable Energy & Environment** organized by Ramjas College, University of Delhi (January **2011**)
38. Delivered lecture on **Green Chemistry in Education & Research** at Miranda House College Delhi University (February **2011**)
39. Delivered lecture in the **inaugural session of the National Science Day 2011** organized by Vigyan Prasar (VP) DST in collaboration with National Institute for Open Schooling (NIOS) under the theme “Science & Technology - Influencing Lives of Youth” (February **2011**)
40. Delivered lecture on **Green Chemistry in Education and Research** at Sri Venkateswara College, Delhi University (March **2011**)
41. Delivered two lectures in DST Green Chemistry **Task Force Sponsored Workshop** at IIT Guwahati (March **2011**)
42. Delivered two lectures on Green Chemistry education & research and demonstrated Green Chemistry Experiments at **UCOST sponsored Green Chemistry Workshop** at HNB central University Garhwal (22-23 March **2011**)
43. Delivered Keynote Address in **National Conference on Environmental Conservation, Sustainable Resource Management and Strategies for Regional Development** with reference to Uttarakhand organized by Department of Chemistry, DBS Postgraduate College, Dehradun (May **2011**).
44. Delivered Lecture as Chief Guest on “Green Chemistry and Sustainable Development” in **National Seminar on “Emerging Trends in Green Chemistry” and 11th National Convention of Chemistry Teachers** (NCCT-2011) organized by Association of Chemistry Teachers (TIFR Mumbai) (October 15-17, **2011**)
45. Delivered lecture in **national symposium on “Chemistry Innovations for Human Well Being”** organized by Department of Chemistry, Himachal Pradesh University, Shimla for celebrating International Year of Chemistry-2011 on 21<sup>st</sup> and 22<sup>nd</sup> October, **2011**



46. Delivered lecture in [International Conference on Chemistry of Phytopotentials: Health, Energy and Environmental perspectives](#) organized by Department of Chemistry, Faculty of Science, Dayalbagh Educational Institute, Agra on 4<sup>th</sup>-6<sup>th</sup> November, **2011**
47. Delivered lecture on Green Chemistry in the [Celebrations of International Year of Chemistry-2011](#) organized by Govt. Kamla Raja Girls Autonomous Postgraduate College, Gwalior (M.P.) on 5<sup>th</sup> November **2011**
48. Delivered Keynote Address in [UGC Sponsored National Seminar on Green Chemistry](#) organized by Department of Chemistry, S.N. College Thiruvananthapuram, Kerala (15-16 December, **2011**).
49. Delivered Inaugural lecture and conducted workshop on “Experiments on Green Chemistry” in [Workshop on Recent Trends in Green Chemistry](#) organized by Department of Chemistry, Daulat Ram College, University of Delhi (January 11-13, **2012**)
50. Delivered lecture in the [National Science Festival](#) organized by St. Stephen's College, University of Delhi from, 20 January 2012 to, 22 January **2012**.
51. Delivered lecture on Green Chemistry for Sustainability and Environmental in [National Symposium On Global Trends in Research in Chemical Sciences](#)” organized by Department of Chemistry, Pt. L.M.S. Govt. Autonomous College, Rishikesh (January 2-3, **2012**)
52. Delivered lecture on Green chemistry for a sustainable future in [International Symposium on Recent Advances in “Green Chemistry” and “Chromatography Sciences”](#) organized by IOCL Faridabad and ISAS Delhi Chapter at Manav Rachna International University, Faridabad (12-14 January, **2012**)
53. Delivered Inaugural lecture and conducted [workshop on “Demonstration of Green Chemistry Experiments”](#) in organized by Department of Chemistry, MMH College, Ghaziabad (February 19, **2012**)
54. Delivered Keynote address in [“National Conference on New Methods and Technologies for Water Conservation & Purification”](#) organized by Poornima Institute of Engineering & Technology, Jaipur (March **2012**)
55. Delivered Lecture in [International Conference on Global Trends in Pure and Applied Chemical Sciences](#)", organized by Asian Journal of Chemistry, on March 3-4, **2012** in Udaipur.
56. Delivered lecture and conducted a workshop on “Experiments on Green Chemistry” in [National Seminar on Recent Trends in Chemistry](#) organized by Department of Chemistry, Sri Venkateswara College, Delhi Univ. (March 20, **2012**)



57. Delivered Keynote address in “National Seminar on “Carbon Emission Versus Go Green, Is There A Midway!” organized by Rajasthan Institute of Engineering & Technology Jaipur (March 18, 2012)
58. Delivered lecture on “Water Quality Issues in India due to Environmental Pollution” in ACS meeting on Sustainability and Water Reclamation on 25<sup>th</sup> March 2012 at Hotel Hilton, San Diego, USA
59. Delivered Keynote address in “National Conference on Sustainable Development and Role of Technologies NCSVRT-2012” on 18<sup>th</sup> May, 2012 organized by Rajasthan College of Engineering for Women, Jaipur.
60. Presented “Initiatives taken by Green Chemistry Network Centre for promoting Green Chemistry Education and Research in India” in the Session “Going Global: Green Chemistry in China and India” at the ACS 16<sup>th</sup> Annual Green Chemistry & Engineering Conference held on June 18-20, 2012.
61. Delivered invited Lecture in student workshop for NSF supported and pre-registered students in ACS 16<sup>th</sup> Annual Green Chemistry & Engineering Conference held on June 21, 2012.
62. Delivered Inaugural lecture and conducted workshop on “Demonstration of Green Chemistry Experiments” at Manav Rachna College of Engineering, Faridabad (July 9, 2012)
63. Delivered lecture on Green Chemistry in Education as a mentor at Kanya Mahavidyala Jalandhar (Punjab) on 18<sup>th</sup> August 2012 in INSPIRE camp to encourage students for research and higher studies in basic Science sponsored by DST.
64. Delivered invited lecture in a two day National Conference on Green Chemistry on 18<sup>th</sup> and 19<sup>th</sup> September 2012 (NCGC12) organized by SRM University, NCR Campus, Modinagar, UP.
65. Delivered an invited lecture on "Research and Educational Activities of Green Chemistry Network Centre " in the National Seminar “Recent Advancements in Chemistry”, RAC 2012 held from Sept 29 to Sept 30, 2012 organized by Department of Chemistry, CCS University, Meerut.
66. Delivered Keynote presentation and chaired session in “First National Convention on Climate Change and Water” organized by Suresh Gyan Vihar University on Oct-10, 2012, Jaipur.
67. Delivered invited lecture on "Green Chemistry in Education and Research" at the national seminar on "Green Chemistry for Greener Environment" held on 26-27<sup>th</sup> Nov. 2012 at Mizoram University (MZU), Aizawl.

68. Delivered invited lecture and chaired a session in “National Conference on Environmental Conservation and Management for Sustainable Era” held on December 20-22, 2012 and organized by S.S. Jain Subodh P.G. College, Jaipur.
69. Delivered Keynote address on Green Chemistry in Education and Research in National Conference on “Green Technologies for Green Environment” on 18<sup>th</sup> February 2013 organized by Chemistry Department of GVM Girls College, Sonapat.
70. Honored by Central University of Gujarat for the contribution in Green Chemistry and delivered invited lecture in International Conference on Emerging Trends in Chemical Sciences (14<sup>th</sup>-15<sup>th</sup> March, 2013).
71. Delivered an invited lecture on “Green Chemistry: Chemistry for a Sustainable Future” on 23<sup>rd</sup> March in a Symposium on Modern Trends in Chemistry organized by M. S. University, Vadodara.
72. Delivered invited lecture on 1<sup>st</sup> April 2013 in science innovation camp sponsored by Department of Science & Technology, New Delhi and organized by Thapar University, Patiala.
73. Presented “Green chemistry education, networking and outreach activities of Indian Green Chemistry Network Centre” at the ACS 17<sup>th</sup> Annual Green Chemistry & Engineering Conference held on June 18, 2013 at the Bethesda North Marriott Hotel & Conference Center, Maryland 20852 USA.
74. Presented “Green Chemistry Network Centre (GCNC) developing a roadmap for Green Chemistry Education in India” at the ACS 17<sup>th</sup> Annual Green Chemistry & Engineering Conference held on June 20, 2013 at the Bethesda North Marriott Hotel & Conference Center, Maryland 20852 USA.
75. Delivered an invited lecture on “Green Chemistry: Chemistry for a Sustainable Future” on 8<sup>th</sup> August 2013 in a National Seminar on Current Trends in Chemical Education organized by Department of Chemistry DDU Gorakhpur University.
76. Delivered invited lecture as opening speaker in the national seminar on “Green technologies in Unit operations” jointly organized by the Gujarat pollution control board and Nandesari Industry Association at Vadodara Gujarat on 16<sup>th</sup> August, 2013.
77. Delivered keynote lecture in 4<sup>th</sup> Asia-Oceania conference on Green and Sustainable Chemistry (AOC-4 GSC) held on 3-6 November 2013 in New Tapei City, Taiwan.

78. Delivered talk on the “Green Chemistry: A safer approach on nanomaterials”, on 22<sup>nd</sup> November 2013 in Education Programme course on “Nanotoxicity-concern and safety measures” organized by CFEES DRDO Delhi.
79. Delivered an invited lecture on “Green Chemistry” in a non-profit Science Outreach activity organized by research scholars of Cambridge University for the motivation of high school students towards pursuing career in science, on 12<sup>th</sup> Dec 2013 at IIT Delhi.
80. Invited to take a session with demonstration in the INSPIRE Internship Program at Amity University Noida Campus on 20-24<sup>th</sup> January 2014.
81. Delivered a keynote address in the National Seminar on “Chemistry and Applied Sciences for Sustainable Development” (CASSD 2014), organized by Govt. L.P. Post Graduate College, Morar, Gwalior, M.P. on 15<sup>th</sup>-16<sup>th</sup> February 2014.
82. Delivered a keynote lecture in a DST Sponsored National Conference on “New Dimensions in Green technology for Sustainable Development” (NCNDGS-2014) on 21<sup>st</sup> February 2014 at Swami Keshvanand Institute of Technology, Management & Gramothan, Jagatpura, Jaipur.
83. Delivered an invited lecture in on “Green technologies: Need for the Future” in the National Conference on “Recent Trends in Research in Chemical Sciences” sponsored by Science & Engineering Research Council (SERC) Department of Science & technology, Govt. of India on 22<sup>nd</sup> February 2014 at Department of Chemistry, Manipal University, Jaipur.
84. Invited as a speaker by Deakin University, Australia for an Indo-Australia Workshop supported by Department of Science & Technology (DST), Govt. of India and Department of Industry Innovation, Science, Research and Tertiary Education, Govt. of Australia on 12<sup>th</sup> - 13<sup>th</sup> March 2014 in Deakin University, Australia.
85. Delivered an invited lecture in the ISCA Haridwar Chapter National Conference on “Innovations in Science & technology for Inclusive Development” at Chaudhary Charan Singh University, Meerut on 22-23<sup>th</sup> March 2014.
86. Invited as Chief Guest and delivered a lecture in the workshop “Environmental Protection and Green Technology (EPGT)” organized by Green Chemistry, Club of Chemistry Department, FET, Manav Rachna International University, Faridabad on 26<sup>th</sup> March 2014.
87. Invited to Present “Wealth from waste through green chemistry: GCNC contribution towards few real world cases in India” at the ACS 18<sup>th</sup> Annual Green Chemistry & Engineering Conference held on 17-19<sup>th</sup> June 2014 at the Bethesda North Marriott Hotel & Conference Center, Maryland 20852 USA.

88. Invited to deliver a talk in Faculty Development Programme (FDP) under TEQIP-II on 8<sup>th</sup> August 2014 on the topic “Contribution of Green Chemistry for Health, Environment & Nanotechnology” at Dr. SSBUI CET Auditorium, Panjab University, Chandigarh.
89. Delivered Inaugural lecture on 11<sup>th</sup> September 2014 at Miranda House for "Green Chemistry and Environment" add on course.
90. Acted as a mentor in DST Sponsored INSPIRE camp 2014 at ISF College of Pharmacy Moga from 27<sup>th</sup> to 31<sup>st</sup> October 2014.
91. Invited by Indo-US Science & Technology Forum as expert to take part in round table discussion in U.S.-India Technology Summit: Roundtable on Water Challenges on 19<sup>th</sup> November 2014 at India Expo Centre, Greater Noida, Delhi-NCR
92. Invited by Director NIT Patna to deliver lecture on its foundation day 28<sup>th</sup> January 2015 at department of Chemistry NIT Patna.
93. Invited to deliver Plenary lecture in National Conference on Recent Advances in Chemical & Environmental Sciences on 27-28<sup>th</sup> February 2015 at Arya P.G. College, Panipat, Haryana, India.
94. Invited to deliver keynote address in UGC Sponsored National Seminar on ‘Recycling Methodology- The Need of the Hour’ organized by R.R Bawa DAV College for Girls, Batala on 27<sup>th</sup> April 2015.
95. Invited to act as the Panelist in the session: World class scientific papers: Can India take the lead? during 5<sup>th</sup> edition of India Association Congress (IAC) held on 21<sup>st</sup> –22<sup>nd</sup> August 2015 at Bengaluru, India.
96. Invited as keynote Speaker on Green Chemistry and its future prospects on 30<sup>th</sup> September 2015 at Govt.V.Y.T.PG. Autonomous College Durg, Chhattisgarh, India
97. Invited to deliver inaugural lecture as Chief Guest of National Seminar in Chemistry Department entitled “Green Chemistry” on 28-29<sup>th</sup> October 2015 at Bhilai Mahila Mahavidyalaya, Bhilai Distt. Durg (Chhattisgarh)
98. Delivered Keynote address in Multidisciplinary National Seminar on “Recent Advances in Science and Technology” organized by Shanti Devi Arya Mahila College, Dinanagar, Gurdaspur on 14<sup>th</sup> November 2015.
99. Invited to deliver lecture in a three-day national workshop on “Green Chemistry” (15<sup>th</sup> to 17<sup>th</sup> October 2015) on 15<sup>th</sup> October 2015 organized by Department of Chemistry, SRM University NCR Campus (Modinagar).

100. Invited to deliver lecture in a national conference on “**Environmental pollution, Health hazards and prevention**” on 11-12<sup>th</sup> December **2015** organized by Department of Chemistry, M.S.J. Govt. College, Bharatpur (Raj).
101. Invited to act as Chief Guest and deliver a lecture in the TEQIP II sponsored short term course on “**Recent Trends in Green Chemistry and Technology**” at NIT Patna during 27<sup>th</sup>-28<sup>th</sup> November, **2015**.
102. Delivered keynote address in the “**National Conference on Modern Trends in Chemical Sciences**” organized by Department of Chemistry, Faculty of Science, Mohanlal Sukhadia University, Udaipur Rajasthan on **30<sup>th</sup> January, 2016**.
103. Invited to deliver plenary lecture and Chair the valedictory session as Guest of Honor and also green chemistry session in 6<sup>th</sup> International Conference on “**Technology, innovation and management for sustainable development**” from 11 to 13<sup>th</sup> February **2016** organized by ITM University, Gwalior.
104. Delivered lecture in the "**National Workshop on The Growing Trends in Green Chemistry**" at Department of Chemistry, Daulat Ram College, Delhi University on 26<sup>th</sup>Februray **2016**.
105. Delivered lecture in “**RASTANTRUM**” organized by SHIVA JI college Delhi University on 17<sup>th</sup> March 2016.
106. Delivered keynote address in one-day Workshop on "**Green Chemistry Practices in Teaching, Research & Industry: Essential Commitment for the Next Generation**" organized by Chemistry department of autonomous Pt. L. M. S. Govt. Post Graduate College, Rishikesh on 30<sup>th</sup> March **2016**.
107. Delivered Keynote address in “**National Workshop in Green Chemistry**” organized by Lingya’s University Faridabad on 8<sup>th</sup> April, **2016**.
108. Invited as a panelist in “**ACS Industry symposium on “Recent Advances in Drug Development**” on 11-12 November, **2016** at Hyderabad, India
109. Delivered Keynote address in a “**National Conference on “Recent Advances Environmental Sciences and Engineering Technologies**” organized by Jodhpur Institute of Engineering and Technology, Jodhpur on 21<sup>st</sup>-22<sup>nd</sup> November, **2016**.
110. Delivered lecture in “**International Conference on Green Trends in Environmental Sustainability**” organized by St. Ann’s College for Women, Hyderabad, India on 16<sup>th</sup>-17<sup>th</sup> December, **2016**.
111. Invited as the guest of honour in “**National conference on Environmental Sustainability in Wastewater Remediation: Current Status and Future Prospects**” by Sri Venkateswara College in association with Royal Society of Chemistry London North India Section on 20<sup>th</sup> January, **2017**.

112. Delivered lecture on “National Seminar Sponsored by Department of Science and Technology on “A paradigm shift towards empowerment of women” organized by Department of Sciences of Kalindi College, University of Delhi on February 3-4, 2017.
113. Delivered keynote address in “National Conference on Clean & Green Energy: The Chemical & Environmental Aspects” organized by Department of Chemistry, Bhaskaryacharya College of Applied Sciences on 16<sup>th</sup>-17<sup>th</sup> Feb, 2017.
114. Delivered lecture in “National Seminar on Recent Innovations in Chemical Science & environmental technology” sponsored by UGC and organized by Sri Aurobindo College on 3<sup>rd</sup> & 4<sup>th</sup> March, 2017.
115. Delivered plenary lecture in “6<sup>th</sup> National Conference on Chemical & Environmental Sciences, Emerging Dimensions and challenges ahead (NCCES-2017)” organized by Arya P. G. College, Panipat in collaboration with ISCA (Kurukshetra Chapter) IOCL, Panipat Refinery on 1<sup>st</sup> April, 2017.
116. Delivered lecture (invited speaker) in National Workshop on “Celebrating Earth Day: A step towards Nurturing Nature” organized by School of Engineering, G. D. Goenka University (GDGU), Gurgaon and National Environment Science Academy (NESA), Delhi on 28<sup>th</sup> April, 2017.
117. Delivered lecture on Green Chemistry Network Centre (GCNC) at University of Delhi: Making Green Chemistry an essential component of Chemical Education in India in “21<sup>st</sup> Annual Green Chemistry & Engineering Conference (GC&E)” hosted by the ACS Green Chemistry Institute® at Reston, Virginia on June 13-15, 2017.
118. Delivered invited lecture in the EAS Technical Session Surface Science and Spectroscopy of Eastern Analytical Symposium, Inc., Crowne Plaza, Princeton, New Jersey, USA on 14<sup>th</sup> November, 2017.
119. Delivered a talk in International Conference on Advances in Chemical Sciences and Allied Fields of Science, Health, Education & Environment held on 8<sup>th</sup>-10<sup>th</sup> March, 2018 at Career College Bhopal.
120. Invited to deliver lecture on 255<sup>th</sup> ACS National Meeting organized by American Chemical Society (ACS) and held during March 18-22, 2018 at New Orleans Morial Convention Center, New Orleans, Louisiana, USA.
121. Delivered invited lecture in National Conference on “Biotechnology and Environment for Sustainable Development (BioESD2019) by Dr. B. Lal Institute of Biotechnology held at 29<sup>th</sup> March 2019.
122. Delivered lecture in International Virtual Conference on Innovative Research in Chemical Sciences (IRCS-2020) organized by Department of Chemistry, SRM Institute of Science & Technology, Ramapuram Campus Chennai on 29<sup>th</sup> June 2020.



123. Invited as a speaker to deliver talk in **24<sup>th</sup> Annual Green Chemistry & Engineering virtual Conference** organized by ACS Green Chemistry Institute® on 18<sup>th</sup> June **2020**.
124. Invited as a keynote speaker in **International Webinar on “The Role of Green Chemistry in Controlling Environmental and Ocean Pollution”** by Department of Chemistry, Gangasheel Mahavidyalaya, Bareilly, UP on 17<sup>th</sup> July, **2020**.
125. Invited as a resource person in a Two Day National Webinar on **“Environment, Sustainability and education: Rethinking during COVID Pandemic”** on June 5 and 6, **2020** organized by Department of Education, University of Delhi.
126. Delivered lecture in weekly webinar series on **“Green Chemistry: Designing Chemistry for Environment and Human Health”** organized by Save The Environment, Kolkata on 29<sup>th</sup> August, **2020**.
127. Invited as Guest of Honour and delivered Keynote lecture in virtual conference on **“Green Chemistry in College Education”** in Gyan Ganga :Initiative for Teaching-Learning Excellence in Chemistry on 7<sup>th</sup> September, **2020** organized by Directorate of College Education, Rajasthan & Government Dungar College, Bikaner, Rajasthan.
128. Invited as a Resource Person in **Science Academies’ Virtual Lecture Workshop on “Green and Sustainable Chemistry”** organized by Department of Chemistry, Rajiv Gandhi University on 17<sup>th</sup>-18<sup>th</sup> December, **2020**.
129. Invited as a Keynote Speaker in virtual **“National Conference on Recent Advances in Chemical & Environmental Sciences: (RACE2021)”** organized by Department of Chemistry and Environmental Science, School of Sciences, ITM University Gwalior on 16<sup>th</sup> January, **2021**.
130. Delivered Invited lectures on **“Green Chemistry Education for Sustainable Environment”** and **“Green Chemistry Experiments”** in a **“Six-Day Online Faculty Development Program on Teaching and Learning of Green Chemistry: Nurturing a new generation of chemists”** organized by Department of Chemistry, NIT Warangal, in Association with the Teaching Learning Centre established under the Scheme of PMMMNMTT, Ministry of Education, Govt. of India, from 26<sup>th</sup> February – 3<sup>rd</sup> March, **2021**.
131. Delivered Invited lecture in National Conference on **“Role of Indian Scientists in Sustainable Development”** on the occasion of National Science Day, NSD2021 on theme **“Future of STI (Science, Technology and Innovation): Impacts on Education, Skills and Work”** organized by Faculty of Sciences, J. C. Bose University of Science and Technology, YMCA on 1<sup>st</sup> March **2021**.
132. Delivered Invited lecture in International Conference on **“Environment, Water, Agriculture, Sustainability and Health (EWASH-2021): United Together In The Battle**



**Against Pandemic**” organized by Save The Environment, Hindu College (University of Delhi), Royal Society of Chemistry, North India, CSIR-National Environmental Engineering Research Institute Delhi Zonal Centre (DZL) and Environment and Social Development Association (ESDA), Delhi held online on 21<sup>st</sup> – 22<sup>nd</sup> January, **2022**.

- 133.** Delivered Keynote lecture on “Green and sustainable chemistry education today for a better tomorrow” in “7<sup>th</sup> National Conference on Innovations in Science, Engineering & Technology” organized by Arya P.G. College, Panipat on 19<sup>th</sup> February, **2022**.
- 134.** Delivered Keynote lecture on “Green Chemistry Network Centre: Contributions towards Catalysis and Green Synthesis” as Invited Speaker in National Conference on “Green and Sustainable Chemistry-2022” (GSC-2022) organized virtually by Department of Chemistry, Indrashil University on 26<sup>th</sup>, 28<sup>th</sup> February & 2<sup>nd</sup> March, **2022**.

### Research Projects (Major Grants/Research Collaboration)

- Academia-Industry Collaboration project from Industry: Reckitt Benckiser-a Multinational Industry, on “Development and analysis of repellent active formulations for sustained consumer benefits” (2021-2024). **Funding: Rs 42,46,080.**
- DST sponsored project on “Fabrication, characterization and application of functionalized silica based magnetic nanocatalyst for the degradation of organic pollutants from waste water” (2020-2023). **Funding: Rs 61,55,027.**
- DST-WTI sponsored project on “Designing and synthesis of highly stable functionalized silica based organic-inorganic hybrid materials/nanomaterials for the online and selective recovery of various metals from different charged wastewater” (2017-2020). **Funding: Rs 47, 27, 000.**
- TERI sponsored project on “Dendrimer-Lipid Complexation: Host-Guest Interactions” (2013-2016) **Funding: Rs.15,10,560**
- Synthesis of biofuels and value added chemicals from lignocellulosic biomass (2012-2015 Council of Scientific and Industrial Research) **Funding: Rs 15,75,000**
- Preparation, characterization and application of metal/metal oxide nanoparticle materials for industrial catalysis (2011-2014 University Grant Commission) **Funding: Rs 7,11,800**
- Vigyan Prasar (DST) Govt. of India sponsored Project on developing Resource material on Green Chemistry for school & college students and teachers. **(2012)**

- Designing of metal selective functionalized silica gels and their applications in Development of specific resins for Cr and Fe followed by scale up of method of extraction of metals by developing bioreactor. (Industry-DU-DST Purse Grant) **Funding: Rs. 9.00 Lakhs**
- IUPAC CHEMRAWN GCI-DEN Grant Award for the years 2005, 2006 and 2007 consecutively with the funding of US\$ 25,000 by American Chemical Society's Green Chemistry Institute for Green Chemistry Networking in India. **(2005-2008)**
- Study on Moradabad based Metal Handicraft Industry related to Raw material, electroplating waste and their impact on Environment and Strengthening of Existing Laboratory for Research & Development, Standardization, Training and Certification of Metal Handicrafts under the scheme of Research & Development (Ministry of Textiles, Govt. of India) **Funding: Rs. 79.47 Lakhs**
- One-pot and solventless synthesis of metallo-porphyrins: A green chemistry approach (2009-2011 University Grants Commission) **Funding: Rs. 9.328 Lakhs**
- Designing and validating Green Chemistry Experiments as Member of DST Green Chemistry Experiment monograph committee constituted by DST Green Chemistry Task Force **(2008 Department of Science & Technology ) Funding: Rs. 1.0 Lakh**
- Bio-extraction of chromium from plants and microbes and formulation development of useful microbes as bio-package for cleaning and reclamation: field demonstration of the bio-package on tannery effluent affected sites. **(2004-2007 Department of Biotechnology) Funding: Rs. 36 Lakhs approx.**
- Designing of metal selective chelating polymers for use in explosive. **(2004 – 2005 Ministry of Defence DRDO) Funding: Rs. 10.5 Lakhs approx.**
- Molecular modeling and chemical speciation studies on interaction of dihydroxycoumarins with metal ions for designing a potent anti-oxidant. **(2002-2005 Council of Scientific and Industrial Research) Funding: Rs. 7.0 Lakhs approx.**
- Recoveries & recycling of heavy metals from electroplating waste **(2002-2005 requirement reality organization) Funding: Rs. 2.5 Lakhs approx.**
- Development of chelating polymer based sensors for detection of toxic metals in effluents. **(2000-2003 Ministry of Defence DRDO)**
- Interaction of metal ions with quinolone drugs and their structural analogs: molecular modeling, chemical speciation and structure-activity relationship. **(1999-2002 University Grants Commission New Delhi)**

- Designing of anti-aids chelators (awarded by royal society of chemistry (London)(1998))
- Major research project entitled, “Computer modeling and formation studies of ternary complexes containing two different metal ions and the implication for metal-metal stimulation phenomena in vivo & environment.” (1999-2001 Awarded by University Grants Commission New Delhi)
- Major research project entitled, “Chelating polymers and related support for separation/pre-concentration of toxic and trace metals in environmental samples” (1993-1996 Awarded by University Grants Commission New Delhi.)

### Awards and Distinctions

- 2021: Awarded “NESA Honorary Fellowship of the Year Award- 2020” on 29<sup>th</sup> January, 2021 by National Environmental Science Academy.
- 2021: Awarded “STE Green Excellence Award, 2020” for his contribution in popularizing the concept and applications of Green Chemistry in India on 19th December, 2020 by Save The Environment.
- 2020: Editorial Board Member, Current Research in Green and Sustainable Chemistry (Elsevier Publications)
- 2019: Honorary Professor of Deakin University, Australia
- 2019: Convener of Undergraduate Syllabus Revision, University of Delhi of all courses related to Chemistry.
- 2019: American Chemical Society’s Committee on International Activities (IAC) awarded a 2019 IAC Global Innovation (GI) Grant of \$5000 USD.
- 2018: Series Adviser to the Editorial Board of RSC Green Chemistry Book Series.
- 2017-2018: Awarded “Green Chemistry Award” in recognition of commitment to and achievement in Green Chemistry by American Chemical Society.
- 2017: Invited to be the part of interview panel as Expert Member for assisting recruitment process for Department of Amity School of Applied Sciences at Amity University, Gurgaon.
- 2017: Nominated by DST to act as a member of Expert Committee to review ongoing/completed projects supported under Water Technology Initiative.
- 2017 Editorial board member of the journal “Nanotechnology for Environmental Engineering” published by Springer.
- 2016 Fellow of Royal Society of Chemistry London.
- 2016 Nominated by Chairman UGC to act as member of Expert Committee that has been constituted by the UGC to evaluate the proposals received under Indo-German Partnerships in Higher Education Programme (IGP).
- 2014-15 Nominated by Chairman UGC and DST to act as a Member of Committees for evaluation of Major Research Projects funded by UGC and DST.

- **2015** Provost of Gwyer Hall ( <http://gwyerhall.du.ac.in/> ) which is the oldest and most prestigious men's Hostel in the Delhi University.
- **2015** Member of the Board of Interdisciplinary Programmes constituted by Vice-Chancellor Delhi University for a term of three years as per provisions of Ordinance XV-A.
- **2015** Invited as expert to assess the technical progress of the projects awarded under DST-UKIERI joint schemes on 21st and 22nd September at Hotel Lalit Delhi.
- **2015** Invited officially by American Chemical Society to present work on “Silica decorated magnetically retrievable base metal nanocatalysts for various organic transformation reactions” at the ACS 19<sup>th</sup> Annual Green Chemistry & Engineering Conference held on July 14-16, 2015 at the Bethesda North Marriott Hotel & Conference Center, Maryland 20852 USA.
- **2014** Invited by Royal Society of Chemistry and the UK Science & Innovation Network to attend the following events in Durban, South Africa from August 17-22, 2014:
  - **August 17-21:** 5<sup>th</sup> IUPAC international conference on green chemistry as speaker and chair of a session.
  - **August 21-22:** UK-India-Brazil-Africa workshop on the use of green chemistry for the sustainable production of biofuels
- **2014** Invited by American Chemical Society to present “Wealth from waste through green chemistry: GCNC contribution towards few real world cases in India” at the ACS 18<sup>th</sup> Annual Green Chemistry & Engineering Conference held on June 17-19, 2014 at the Bethesda North Marriott Hotel & Conference Center, Maryland 20852 USA.
- **2013** Honored by Professor Y.K. Alagh, former Union Minister of State for Science and Technology, former VC of the Jawaharlal Nehru University for his contribution for the popularization of Green Chemistry in India during inaugural function of International Conference on Emerging Trends in Chemical Sciences on 14th March, 2013 organized by Central University of Gujarat at Gandhi Nagar.
- **2013** Invited by American Chemical Society to present “Green chemistry education, networking and outreach activities of Indian Green Chemistry Network Centre” at the ACS 17<sup>th</sup> Annual Green Chemistry & Engineering Conference held on June 18, 2013 at the Bethesda North Marriott Hotel & Conference Center, Maryland 20852 USA.
- **2012** Invited by Royal Society of Chemistry (London) to attend the Royal Society of Chemistry General Assembly and International Delegate Day 2012 on 8 - 10 November, Birmingham Hilton Metropole, UK as International Representative for India
- **2012** Member Royal Society of Chemistry London International Steering Group
- **2012** Invited by American Chemical Society's Green Chemistry Institute to deliver lecture on International Green Chemistry at post conference students workshop for NSF scholars and pre-registered students on 21<sup>st</sup> June 2012 (16<sup>th</sup> ACS Green Chemistry & Engineering Conference held on 18-20 June 2012) at Washington DC USA <http://acswebcontent.acs.org/gcande/pdf/Student%20Workshop%20Agenda.pdf>
- **2010** Indian National Science Academy-Japan Society for the Promotion of Science (JSPS) award
- **2010** Nominated to visit Mauritius under 4<sup>th</sup> UGC-TEC Consortium Agreement 2007-2010

- **2009** Member of DST International Division Project Assessment Committee for International Projects.
- **2009** Invited by American Chemical Society's Green Chemistry Institute to deliver opening lecture in Green Chemistry Education Train the Trainer Workshop at 13<sup>th</sup> ACS Green Chemistry & Engineering Conference held on 22-26 June 2009 at University of Maryland USA
- **2008** Honorary Secretary Royal Society of Chemistry, London (North India Section)
- **2008** Invited by Royal Society of Chemistry (London) to attend the Royal Society of Chemistry General Assembly 2008 as International Representative for India in London, United Kingdom on November 12-14<sup>th</sup> 2008.
- **2008** Member of DST Green Chemistry Experiment monograph committee constituted by DST Green Chemistry Task Force for preparing Green Chemistry Experiments Manual
- **2007** IUPAC CHEMRAWN GCI-DEN Grant Award of US\$ 5,000 by American Chemical Society's Green Chemistry Institute for Green Chemistry Networking in India.
- **2006** IUPAC CHEMRAWN GCI-DEN Grant Award of US\$ 10,000 by American Chemical Society's Green Chemistry Institute for Green Chemistry Networking in India.
- **2005** IUPAC CHEMRAWN GCI-DEN Grant Award of US\$ 10,000 by American Chemical Society's Green Chemistry Institute for Green Chemistry Networking in India.
- **2003** Member DST Evaluation Committee for JSPS (Japan) Award headed by Prof. S.K. Joshi Ex- DG CSIR
- **2002** Indian National Science Academy-Japan Society for the Promotion of Science (JSPS) award
- **2001** Incharge International Chapter of The American Chemical Society –Green Chemistry Institute
- **2001** Chaired a session on “Clean Water and Air through Green Chemistry” in IUPAC CHEMRAWN XIV World Conference on Green Chemistry: University of Colorado at Boulder, June 9-13, 2001.
- **1999** World Green Award
- **1998** Research Grant Award by Royal Society of Chemistry London
- **1998** Japan Society For The Promotion Of Science (JSPS) Post Doctoral Award
- **1995** Indo-German Cultural Exchange Programme Award nominated by UGC
- **1995** UGC National Research Scientist “B” equivalent to Reader

#### **Association with Professional Bodies**

- Member American Chemical Society
- Member Royal Society of Chemistry, LONDON
- Member Green Chemistry Network RSC London
- Life Member National Environmental Science Academy (NESA)
- Life member of Indian Chemical Society, Calcutta.
- Life member of Indian Society of Analytical Scientist, Bombay.

- Life member of Indian Association of Nuclear Chemists & Allied Scientists, BARC, Bombay.
- Life member of Indian Science Congress Bombay
- Member Indo-US Green Chemistry Network

## Other Activities

- Member of BRS, University of Delhi
- Member of DRC, Department of Chemistry, University of Delhi.
- Editorial board member of the journal “Nanotechnology for Environmental Engineering” published by Springer.
- Chancellor’s nominee on the selection committees in Chemistry for M D University Rohtak and member of selection committees for various Universities and Institutes including Banaras Hindu University, Jawaharlal Nehru University, Central University Rajasthan, Dayal Bagh University Agra, BITS MESRA, Ministry of Textiles, Thapar University, ITM University, NIT Patna, CSIR-TKDL Unit, K M College Delhi University, Hansraj College Delhi University, Deshbandhu College Delhi University, Deen Dayal Upadhyaya College Delhi University, Dyal Singh College Delhi University, Maitreyi College Delhi University, Miranda House College Delhi University, Zakir Husain College, Rajdhani College, ARSD College Delhi University, etc. Chaired various selection committees held for the appointment of Assistant Professors in Zoology, History, Political Science, Hindi etc. at Dyal Singh College Delhi University.
- Invited as Expert in interview Board at Uttarakhand Public Service Commission, Gurukul Kangari, Haridwar, Near Gurukul Kangari University, Haridwar for Lecturer, Chemistry (General Branch) in Govt. Colleges of Uttarakhand.
- Invited as subject expert in the promotion for the post of Professors in Department of Chemistry, D.D.U. Gorakhpur University.
- Nominated by the Vice-Chancellor as one of the expert in selection committee for the applicants of the Faculty Training Programme run by the University of Delhi. In this programme, young college teachers are fully sponsored by the University of Delhi to do one year Master's course in their allied areas of specialization at the universities in UK which are the members of the Universitas 21 Network of Higher Education
- UGC member of Governing body of Autonomous Pt. L.M.S. Autonomous Govt. Post Graduate College Rishikesh.
- Member Governing body and treasurer of Dyal Singh College Delhi University
- Member Governing body Ramanujan College Delhi University
- Member Board of Studies in Chemistry for Universities (Guru Jambheshwar University of Science & Technology, Hisar, Gautam Buddha University, Greater Noida, Manav Rachna Faridabad, Mizoram University, Lingaya's University Faridabad, Dayalbagh Educational Institute, Dayalbagh, Agra)
- Member of Research Degree committee (RDC) in the discipline of Applied Science (Chemistry) of Punjab Technical University etc.
- Member panel for HRD Selection Committee for Government Scholarship 2015-16 which is scheduled to be held on 17-02-2015.
- UGC nominee in the advisory committee for the S.A.P. granted to Department of Chemistry, Lucknow University.
- Member Chemistry Syllabus designing committee of Central University Rajasthan for designing Green Chemistry Syllabi.



- Editorial Advisory Board Member of the journal Current Microwave Chemistry published by Bentham Science Publishers
- Editorial Board Member of Current Research in Green and Sustainable Chemistry.

**Reviewer for the journals** ( Journal of Chemical Education, Inorganic Chemistry Communications, Current Catalysis, Separation Science and Technology, Applied Catalysis A: General, Applied Catalysis B: Environmental, Reactive and Functional Polymers, Journal of Heterocyclic Chemistry, Toxicological & Environmental Chemistry, The International Nano Letters, Journal of the Brazilian Chemical Society, Indian Journal of Chemistry Sec A, Journal of Hazardous Materials, Applied Water Science, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, Marine Chemistry, Journal of the Electrochemical Science and Engineering, Phosphorus, Sulfur, and Silicon and the Related Elements, Applied Water Science, Journal of Polymers and the Environment, International Journal of Environmental Analytical Chemistry, Catalysis Communications, Springer Journal Research on Chemical Intermediates, Food Analytical Methods, Industrial & Engineering Chemistry Research, Green Chemistry Letters and Reviews, Clean - Soil, Air, Water, Separation and Purification Technology, Chemical Engineering Journal, Water, Air, & Soil Pollution, Talanta, Environmental Technology, Journal of Molecular Structure, Canadian Journal of Chemistry, International Journal of Thermal Sciences, Environmental Science & Technology, Analytica Chimica Acta, Chemosphere, Journal of Chemical Sciences, Mini-Reviews in Medicinal Chemistry , Current Medicinal Chemistry, ACS and RSC journals such as New Journal of Chemistry, Catalysis Science & Technology, Green Chemistry, RSC advances etc.)

Editorial board member of the journal “Nanotechnology for Environmental Engineering” published by Springer.

## Patents

1. A. Adholeya and **R.K. Sharma** (2010), Patent: **CBR 4171 1146/del/2010**
2. **R.K. Sharma**,\* A. Adholeya\*, CBR/11584, Registration No.-**3461/DEL/2012**
3. **R.K. Sharma**,\* A. Adholeya\*, Anil kumar, Registration No.- **3287/DEL/2013**
4. **R.K. Sharma**,\* A. Adholeya\*, Registration No.- **3288/DEL/2013**