



Professor Rajeev Singh

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EDUCATION

- **The World Academy of Sciences (TWAS-CNPq) Postdoctoral Fellow**
Centro de Ciências, Universidade Federal do Ceará
Fortaleza- CE, Brazil (2011-12)
- **Ph.D.**, Department of Chemistry, University of Delhi (2006)
Title: Synthesis, Physico-chemical and Thermal Characterization of Organometallic Complexes with ligands containing N-, S- as donor atoms.
Advisor: Professor Narendra Kumar Kaushik.
- **M. Sc.** (Inorganic Chemistry), Department of Chemistry, University of Delhi (2001)
- **B. Sc.** Chemistry (Honors), Hindu College, University of Delhi (1999)
- **XIIth**, Shaheed Rajpal D.A.V Public School, Dayanand Vihar, Delhi (1995)



UFC



POSITIONS HELD

- **Professor**, Department of Chemistry, Atma Ram Sanatan Dharma College, University of Delhi (Academic Level 14) (August 2021 onwards)
- **Associate Professor**, Department of Chemistry, Atma Ram Sanatan Dharma College, University of Delhi (Academic Level 13A) (2018-2021)
- **Senior Assistant Professor (Permanent)**, Department of Chemistry, ARSD College, University of Delhi (Academic Level 12) (2015-2018)
- **Senior Assistant Professor (Permanent)**, Department of Chemistry, ARSD College, University of Delhi (Academic Level 11) (2010-2015)
- **Assistant Professor (Permanent)**, Department of Chemistry, ARSD College, University of Delhi (Academic Level 10) (2009-2010)
- **Assistant Professor (Ad hoc)**, Department of Chemistry, ARSD College, University of Delhi (2007-09)

- **Assistant Professor (Ad hoc)**, Department of Polymer Science, Bhaskaracharya College of Applied Sciences, University of Delhi (2006-07)
- **Member Secretary/ Incubator Manager:** Pivotal role in establishing the Centre for Innovation and Entrepreneurial Leadership, Technology Business Incubator, Ministry of Micro, Small and Medium Enterprise, GoI. (2015-21)
- **Member Secretary/ Overall Coordinator**, STAR College Scheme, Department of Biotechnology, Government of India. Pivotal role in establishing the DBT Science Centre (2014-20).

TEACHING AND RESEARCH

Broad research areas: Material Chemistry, Hybrid materials, Organometallic Complexes, Bioinorganic Chemistry.

- Use of sol-gel technique for the synthesis of ceramic and hybrid materials. Processes and techniques. Analysis of hybrids and nanocomposite materials.
- Preparation of clay based materials for removal of dyes from wastewater. Applications of synthesized compounds in treatment of contaminated water.
- Synthesis and Chemistry of **Material Chemistry/ Organometallic compounds of main group metals** using different N-, S-, O- containing donor ligands like bioactive *Schiff bases*, *thiohydrazides* and *thiohydrazones*. Studies of their physico-chemical properties are conducted using mass, NMR (^1H , ^{13}C , Sn), IR, UV and elemental studies and scanning electron microscopy (SEM). The important aspects of the work are: **Thermal studies (TGA/DSC)** Calculation of various kinetic and thermodynamic parameters like activation energy (E_a), order of reaction (n), apparent activation entropy ($S^\ddagger$) and heat of reaction (ΔH) etc, **Biological activity** (anti-fungal, bacterial) **Inhibitory action for controlling Corrosion** Anti-corrosion behavior testing against mild steel and nickel using potentiostatic and galvanostatic methods (Tafel curve studies, passivity) and their percentage efficiency etc.
- Synthesis of **Newly Designed Macrocyclic Ligands & their Transition Metal Complexes**. Characterization & investigation of their structure by elemental analysis, magnetic moments, IR, ^1H NMR, ^{13}C NMR and electronic spectral studies with Solution Behavior and Biological Studies..
- Experience as Patent Consultant: Patent Opposition, Prosecution, Patent Search, Drafting, Filing (US, WIPO, INDIA), Patent analysis, Infringement analysis, IP mapping, Patent mining, Technology tracking, Claim analysis, Delphion, MicroPat, PatWeb, USPTO, SciFinder, STN Analysis, Esp@cenet, Dialog, World Intellectual Property Search (WIPO), Ekaswa–A, Indian Patents.

SPONSORED R& D PROJECTS (GRANTS)

1. **Co-PI, Special Call for Short-term Empirical Research Project, (ICSSR), (2023-24)**
Title: Role of Atal Innovation Mission in Promoting Innovation and Entrepreneurial Ecosystem in India: A Case Study of selected Atal Tinkering Labs of Delhi, Uttar Pradesh, Rajasthan, Haryana. (Rs. 14.00 Lakh)
2. **Principal Investigator, STAR Innovative Project, University of Delhi (2016-19)**
Title: An alternative for petrochemical based polymers: Synthesis of biobased/semi-biobased, biodegradable, photo-functional & high-performance polymers with advanced properties for a sustainable future. (Rs. 20.15 Lakh)
3. **Principal Investigator, Major Research Project, University Grants Commission (UGC) (2013- 2017)**
Title: *Synthesis and characterization studies of some single source molecular precursors of Al(III), V(V), Ti (IV) and related metals for the preparation of ceramic materials.*”
(Rs. 13.70 Lakh)
4. **Principal Investigator, Innovation Project (2015-16), University of Delhi**
Title: *Building a Future for Water: Cost effective Alternative Plan to Yamuna Action Plan and Ganga Action Plan, remedial and recovery.* (Rs. 5.00 Lakh)

Other Projects: In-house Undergraduate project (STAR Scheme)

2025-26

- Synthesis and Characterization of Adsorbent–Metal Alginate Hybrid Biosorbent for the Adsorptive removal of toxic dyes.

(2024-25)

- New Approach in Medicinal Organometallic Chemistry

(2018-19)

1. *Development of Low Cost reversible osmosis system*
2. *Novel Adsorbents for efficient dye removal*
3. *Compounds for wastewater treatment*
4. *Quantitative analysis and comparison of commercially available antacids in Indian market*

(2015-16)

1. *Green Synthesis of metal nanoparticles using plant extracts as reducing agents*
2. *A survey of blood inventory in various government hospitals of Delhi and NCR region*

INTERNATIONAL PUBLICATIONS & BOOK CHAPTERS

Citations:	854
<i>h</i> -index:	16
<i>i10</i> index:	26

(Data from Google Scholar, Clarivate IF & Cite Score 2024)

38. वैदिक ऋषियों से स्वराज तक: पी. सी. रे की रसायन विज्ञान की सर्वोत्कृष्ट रचना, राजीव सिंह,
Journal: भारतीय वैज्ञानिक एवं औद्योगिक अनुसंधान पत्रिका, CSIR-NIScPR, (ISSN: 0971-7706) (2026)
37. N-Heterocyclic Carbene-Silver(I) Complexes: Emerging Developments for Medicinal Applications, V Kumawat, S C Mohapatra, M Singla and **Rajeev Singh***, **Current Bioactive Compounds**, 22(5) (Cite Score: 1.8) (2026)
36. Synthesis of Transition Metal Nanoparticles Immobilized to Graphene (GO and RGO) as an Enhancer of Dissolved Oxygen with Reduced Band-Gap Energy. Kumawat, V, Aggarwal, S, Singla, M, Bansal S, **Rajeev Singh**, Kumar R, Das P J., **J. Electron. Mater.**, 54(12), 10975-10984 (IF 2.5) (<https://doi.org/10.1007/s11664-025-12486-2>) (2025)
35. Adsorption of malachite green and chrysoidine-Y by Sn-pillared clay, L Raghav, P Patanjali, I Chopra & **Rajeev Singh***, **Environmental Quality Management** (Wiley), 32 (3), 181-193, (ISSN: 1088-1913), (IF 1.3) (<https://doi.org/10.1002/tqem.21888>) (2023)
34. Adsorption and kinetic studies for removal of basic dyes using pillared bentonites, L Raghav, P Patanjali, I Chopra & **Rajeev Singh***, **Indian Journal of Chemical Technology**, 29 (1), pp 47-53, (ISSN: 0971-457X) (IF: 1.0) (2022)
(<http://nopr.niscair.res.in/handle/123456789/59578>)
33. Organobentonite as an Efficient and Reusable Adsorbent for Cationic Dyes Removal from Aqueous Solution, P Patanjali, I Chopra, A Mandal, **Rajeev Singh***, **Journal of Scientific & Industrial Research**, 80 (01), 80-86 (ISSN: 0975-1084) (IF: 0.8) (2021)
(<http://nopr.niscair.res.in/handle/123456789/55851>)
32. Green synthesis of gold nanoparticles from *Combretum indicum* and their characterization, S S Gupta, P Patanjali, N K Mishra, A Kumar, I Chopra & **Rajeev Singh***, **Indian Journal of Chemical Technology**, 28 (6), PP 730-734, (ISSN: 0971-457X) (IF: 1.0) (2021)
(<http://nopr.niscair.res.in/handle/123456789/59047>)
31. Kinetics and isotherm studies for adsorptive removal of methylene blue from aqueous solutions using organoclay, P Patanjali, I Chopra, A Mandal & **Rajeev Singh***, **Indian Journal of Chemical Technology**, 28, 86-93, (ISSN: 0971-457X) (IF: 1.0) (2021)
(<http://op.niscair.res.in/index.php/IJCT/article/view/43063>)
30. Adsorption of cationic dyes onto biopolymer-bentonite composites: Kinetics and Isotherm

- studies, P Patanjali, A Mandal, I Chopra, Rajeev Singh, **International Journal of Environmental Analytical Chemistry**, (Taylor & Francis) (ISSN: 0306-7319) (IF: 2.5) (<https://doi.org/10.56093/ijas.v90i12.110309>) (2020)
29. A compendious review on clay modification techniques for wastewater remediation, P Patanjali, I Chopra, N Patanjali, Rajeev Singh, **The Indian Journal of Agricultural Sciences**, 90 (12), 2262-74 (ISSN: 0019-5022) (Scopus CiteScore: 1.2) (2020) (<http://epubs.icar.org.in/ejournal/index.php/IJAqS/article/view/110309>)
28. Bioinorganic Chemistry of Platinum(IV) Complexes as Platforms for Anticancer Agents, L Nagyal, A Kumar, R Sharma, R Yadav, P Chaudhary and Rajeev Singh*, **Current Bioactive Compounds**, 16(6).726-737, (Bentham Science) (ISSN: 1573-4072) (2020) (<https://doi.org/10.2174/1573407215666190409105351>) (Scopus CiteScore: 1.8)
27. Synthesis of nano-sized Titania using new chemically modified Schiff base complexes of Titanium(IV) isopropoxide through sol-gel technology, N K Mishra, A Kumar, P Chaudhary, Rajeev Singh*, **Materials Research Innovations**, 23:1, 43-48 (ISSN: 1433-075X) (Taylor & Francis) (Scopus CiteScore: 4.1) (<https://doi.org/10.1080/14328917.2017.1372087>) (2019)
26. Trimetallic oxide nanocomposites of transition metals Titanium and Vanadium by sol-gel technique: Synthesis, characterization and electronic properties, A Kumar, N Mishra, K Sachan, M Ali, S Gupta, Rajeev Singh, **Materials Research Express**, 5(4), 045037, (IOP Science) (DOI: 10.1088/2053-1591/aabd23) (IF: 2.2) (2018) (<https://doi.org/10.1088/2053-1591/aabd23>)
25. Reviewing Gold(III) complexes as effective biological operators, Pooja Patanjali, R Kumar, Sourabh, A Kumar, P Chaudhary, Rajeev Singh*, **Main Group Chemistry**, 17(1), 35-52 (ISSN: 1024-1221) (IOS Press) (DOI 10.3233/MGC-180247) (IF: 1.0) (2018) (<https://content.iospress.com/articles/main-group-chemistry/mgc247>)
24. Bioavailability enhancement of poorly water-soluble nano diosgenin by encapsulation using chitosan/bovine serum albumin bilayers, S Pathak, R Kumar, P Mehndiratta, N Mishra, A Thukral, Rajeev Singh, **Asian Journal of Pharmaceutics**, 12 (2), 115-119 (2018) (<http://dx.doi.org/10.22377/ajp.v12i02.2323>)
23. Structural investigation of nanomixed $x\text{SnO}_2\text{-Al}_2\text{O}_3$ synthesized by sol- gel route; C Kumar, NK Mishra, A Kumar, M Bhatt, P Chaudhary, Rajeev Singh*, **Applied Nanoscience**, 6 (7), 1059–1064 (ISSN 2190-5509) (Springer) (2016) (<https://doi.org/10.1007/s13204-015-0515-6>)
22. Green synthesis and characterization of silver nanoparticles using aqueous petal extract of medicinal plant *Combretum indicum*, G Bahuguna, A Kumar, N Mishra, C Kumar, A Bahlwal, P Chaudhary, Rajeev Singh*, **Materials Research Express**, 3(7), 075003 (IOP Science) (IF: 2.2) (<https://doi.org/10.1088/2053-1591/3/7/075003>) (2016)
21. ^1H -NMR and FT-IR dataset based structural investigation of poly(amic acid)s and polyimides from 4,4'-diaminostilbene; A Kumar, S Tateyama, K Yasaki, MA Ali, N

- Takaya, Rajeev Singh, T Kaneko, **Data in Brief**, 7, 123-128, (*Elsevier*) (ISSN: 2352-3409) (IF: 1.4) (<https://doi.org/10.1016/j.dib.2016.02.006>) (2016)
20. Organotin(IV) complexes of thiohydrazones of phenethylamine: Synthesis, characterization, biological and thermal study; A Kumar, P Chaudhary, Rajeev Singh*, NK Kaushik **Main Group Chemistry**, 15(2) (163-178) (DOI 10.3233/MGC-150196) (ISSN print 1024-1221) (*IOS Press*) (IF: 1.0) (2016) (<https://content.iospress.com/articles/main-group-chemistry/mgc196>)
19. Ultrahigh performance bio-based polyimides from 4,4'-diaminostilbene; A Kumar, S Tateyama, K Yasaki, MA Ali, N Takaya, Rajeev Singh, T Kaneko, **Polymer**, Volume 83, 182-189 (*Elsevier*) (ISSN: 0032-3861) (IF: 4.5) (2016) (<https://doi.org/10.1016/j.polymer.2015.12.008>)
18. Thin film coating through sol-gel technique, G Bahuguna, N K Mishra, P Chaudhary, A Kumar, Rajeev Singh*, **Research Journal of Chemical Sciences**, 6 (7), 65-72, (ISSN: 2231-606X) (<http://www.isca.in/rjcs/Archives/v6/i7/10.ISCA-RJCS-2016-153.php>) (2016)
17. Synthesis, characterization, thermal and biological activity of some novel Cadmium(II) – pyridine and purine base complexes; N Gandhi, A Kumar, C Kumar, N Mishra, P Chaudhary, NK Kaushik, Rajeev Singh*, **Main Group Chemistry**, 15 (1), 35-46, (ISSN: 1024-1221) (*IOS Press*) (IF: 1.0) (2016) (<https://content.iospress.com/articles/main-group-chemistry/mgc181>)
16. Structural and optical properties of SnO₂-Al₂O₃ nanocomposite synthesized via the sol-gel route, NK Mishra, C Kumar, A Kumar, M Kumar, P Chaudhary, Rajeev Singh* **Materials Science-Poland**, 33(4) 714-718, (ISSN 0137-1339) (*De Gruyter*) (IF: 1.6) (<https://doi.org/10.1515/msp-2015-0101>) (2015)
15. Effects of Sb, Zn doping on structural, electrical and optical properties of SnO₂ thin films, R Singh, M Kumar, S Shankar, Rajeev Singh, AK Ghosh, OP Thakur, B Das **Materials Science in Semiconductor Processing** (31) 310-314, (ISSN: 1369-8001) (*Elsevier*) (IF: 4.6) (<https://doi.org/10.1016/j.mssp.2014.12.010>) (2015)
14. Sol-gel derived nanomaterials and its applications: A review, A Kumar, N Yadav, M Bhatt, N K Mishra, P Chaudhary, Rajeev Singh*, **Research Journal of Chemical Sciences**, 5(12), 98-105, (E-ISSN: 2231-606X) (2015) (<http://www.isca.in/rjcs/Archives/v5/i12/10.ISCA-RJCS-2015-152.php>)
13. In-silico identification of novel topoisomerase-I inhibitors: Application of ligand based pharmacophore modeling and chemical database mining, S Singh, S Paliwal, A Pandey, S Das, Rajeev Singh*, **Der Pharma Chemica**, 7 (4), 123-148, (ISSN 0975-413X) (2015)
12. Quantitative structure activity relationship studies of topoisomerase I inhibitors as potent anti-breast cancer agents, S Singh, S Das, A Pandey, S K Paliwal, Rajeev Singh* **Journal of Chemistry**, Vol. 2013, Article ID 849793 (ISSN: 2090-9063) (IF: 2.6)

- (<https://doi.org/10.1155/2013/849793>) (2013)
11. Synthesis, characterization, thermal and antimicrobial activities of some novel Organotin(IV) Purine base complexes, R Jain, Rajeev Singh*, NK Kaushik, **Journal of Chemistry**, Vol. 2013, Article ID 568195, (IF:2.6) (ISSN: 2090-9063) (<https://doi.org/10.1155/2013/568195>) (2013)
 10. A Review: Organotin compounds in corrosion inhibition, Rajeev Singh*, P Chaudhary, NK Kaushik, **Reviews in Inorganic Chemistry** 30 (4) 275-295, (ISSN: 2191-0277) (*De Gruyter*) (Impact Factor: 3.1) (<https://doi.org/10.1515/REVIC.2010.30.4.275>) (2010)
 9. Synthesis, spectral, thermal and anti-fungal studies of coordination compounds of Organotin (IV) thiohydrazone complexes, Rajeev Singh* and NK Kaushik, **Spectrochimica Acta-A: Molecular and Biomolecular Spectroscopy** 72(4) 691-696, (ISSN: 1386- 1425) (*Elsevier*) (IF: 4.6) (<https://doi.org/10.1016/j.saa.2008.06.003>) (2009)
 8. Spectral and thermal studies with anti-fungal aspects of some organotin(IV) complexes with nitrogen and sulphur donor ligands derived from 2-phenylethylamine, Rajeev Singh, NK Kaushik, **Spectrochimica Acta-A: Molecular and Biomolecular Spectroscopy** 71(2) 669-675 (*Elsevier*) (IF: 4.6) (<https://doi.org/10.1016/j.saa.2008.01.015>) (2008)
 7. Studies on organotin(IV) and organozinc(II) complexes with some dithiocarbazate schiff bases, Rajeev Singh, NK Kaushik, **Main Group Metal Chemistry**, 30(6), 333–344, (ISSN: 2191-0219) (*De Gruyter*) (IF: 1.2) (<https://doi.org/10.1515/MGMC.2007.30.6.333>) (2007)
 6. Organotin(IV) complexes of thiohydrazides & thiodiamines: Synthesis, spectral and thermal studies, Rajeev Singh*, NK Kaushik, **Spectrochimica Acta-A: Molecular and Biomolecular Spectroscopy** 65 (3-4), 950-954, (ISSN: 1386-1425) (*Elsevier*) (IF: 4.6) (<https://doi.org/10.1016/j.saa.2006.01.040>) (2006)
 5. Chromium (III) complexes with different chromospheres macrocyclic ligands: Synthesis and spectroscopic studies, R Kumar, Rajeev Singh, **Turkish Journal of Chemistry**, 30 (1) 77-87 (IF: 1.4) (<https://journals.tubitak.gov.tr/chem/vol30/iss1/9>) (2006)
 4. Coordination chemistry of copper(II) complexes with N₄, N₄S₂ and N₄O₂ donor macrocyclic ligands: Biological aspects – antifungal, synthesis, spectral studies and magnetic moments, R Kumar, Rajeev Singh, **Russian Journal of Coordination Chemistry**, 32 (3) 192-198, (ISSN: 1608-3318) (*Springer*) (IF: 1.1) (<https://doi.org/10.1134/S1070328406030055>) (2006)
 3. Nickel(II) complexes with different chromospheres containing macrocyclic ligands: Spectroscopic and electrochemical studies, S Chandra, R Kumar, Rajeev Singh, **Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy**, 65 (1) 215-220 (*Elsevier*) (IF: 4.6) (ISSN: 1386-1425) (<https://doi.org/10.1016/j.saa.2005.10.033>) (2006)
 2. Coordination stability between metal/ligands interaction by modern spectroscopic studies: IR,

electronic, EPR and cyclic voltammetry of cobalt(II) complexes with organic skeleton containing cyclic ligands, S Chandra, R Kumar, Rajeev Singh, AK Jain, **Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy**, 65 (3-4) 852-858, (*Elsevier*) (IF: 4.6) (<https://doi.org/10.1016/j.saa.2006.01.005>) (2006)

1. Synthesis, characterization & thermal studies of some dithiocarbazate schiff bases- Organotin(IV), Organozinc(II) complexes, Rajeev Singh, NK Kaushik, **Main Group Metal Chemistry**, 27 (6), 327-333, (ISSN 0792-1241) (*De Gruyter*) (IF: 1.2) (<https://doi.org/10.1515/MGMC.2004.27.6.327>) (2004)

BOOK CHAPTER

9. Food Waste Materials for Bioenergy Production.

Book title: Sustainable Valorization of Agriculture & Food Waste Biomass.

ISBN: 978-981-99-0528-7

Publisher: Springer, Singapore (2023)

8. Chapter 1, Role of pyridine and its privileged derivatives as anti-infective agents

Book title: Recent Developments in the Synthesis and Applications of Pyridines

ISBN: 978-0-323-91221-1

Publisher: Elsevier (2023)

7. Chapter 5: Advancing water quality assessment via artificial neural networks (ANNs)

Book title: Spectroscopy and Machine Learning for Water Quality Analysis,

ISBN: 978-0-7503-3047-3, (<https://doi.org/10.1088/978-0-7503-3047-3ch5>)

Publisher: IOP Publishing Ltd (2021)

6. Chapter 2: Emerging Nanomaterials for Cancer Therapy (2020)

Book title: Nanoparticles in Medicine

ISBN: 978-981-13-8953-5, (https://doi.org/10.1007/978-981-13-8954-2_2)

Publisher: Springer Nature, Singapore

5. Chapter 20, Nanotechnology for water treatment: A green approach (2019)

Book: Green Synthesis, Characterization and Applications of Nanoparticles

ISBN: 9780081025796, (<https://doi.org/10.1016/B978-0-08-102579-6.00021-6>)

Publisher: Elsevier

4. Chapter Sol-Gel deposition of thin films (2019)

Book: Digital Encyclopedia of Applied Physics

ISBN: 9783527268412, (<http://dx.doi.org/10.1002/3527600434.eap808>)

Publisher: Wiley-VCH Verlag GmbH & Co. KGaA

3 Chapter 24, Nanotechnology: A Green and Sustainable Vision (2018)

Book: Nanotechnology in Environmental Science, First Edition

Publisher: Wiley-VCH Verlag GmbH & Co. KGaA

(DOI: 10.1002/9783527808854) ISBN: 978-3-527-80886-1

2. **Chapter 22, The Green Button Initiative** (2017)
Book: Climate Change and Disaster Management
Publisher: CPDHE, University of Delhi (ISBN: 978-81-934519-5-3)
1. **Chapter 15: Organotin Compounds: A Review;**
Recollections of 20th Century Chemistry, Commemorative volume, Prof. G. Gopala Rao
Centenary Celebrations (2008)
Publisher: Andhra University

POPULAR OUTREACH AS SCIENCE COMMUNICATOR/ WRITINGS/ TALKS/ OTHERS

POPULAR WRITINGS

1. **Bamboo to the Rescue of a Choking Delhi**, *Science India*, (April 2025) (ISSN: 0972-8287)
Publisher: *Vijnana Bharati*
2. **The Green Hydrogen The Fuel of Future**, *Science India*, (June 2024) (ISSN: 0972-8287)
Publisher: *Vijnana Bharati*
3. **Emergence of Chemical Labs and Industries in Independent India**, *Science India Collector's Edition 3.0*, (August 2023) (ISSN: 0972-8287) Publisher: *Vijnana Bharati*
4. **Encashing the Green Gold of India**, *Science India*, (March 2023) (ISSN: 0972-8287)
Publisher: *Vijnana Bharati*
5. **The Blood-stained Blue Rebellion**, *Science India Collector's Edition 2.0*, (August 2022) (ISSN: 0972-8287) Publisher: *Vijnana Bharati*
6. **The Lady with the Madagascar Periwinkle**, *Science India*, (Nov. 2022) (ISSN: 0972-8287)
Publisher: *Vijnana Bharati*
7. **Bharat Ratna Mahamana: The Maker of Modern India**, *Science India*, (Dec. 2022) (ISSN: 0972-8287) Publisher: *Vijnana Bharati*
8. **Content Research Expert** for the Movie **"Revolutionary in the Garb of a Scientist"** directed by Bollywood director Nandan Khudiyar released on 02 August 2022. *The movie was the inaugural movie at 12th National Science Film Festival 2022.*
9. Resource Person, **"Revolutionaries of India: Scientists and Freedom Fighters"**, National Virtual Conference on Azadi ka Amrit Mahotsava: Past Present and Future of Indian Sciences, University of Mumbai, Mumbai (30 July 2022)
10. Resource Person, **"स्वतंत्रता आंदोलन और विज्ञान"**, SRIJAN Internship sessions, Vidhyarthi Vigyan Manthan (VVM), ICGEB, Delhi (28 July 2022)

11. **Aranmula Kannadi, The World's Most Perfect Mirrors**, *Science India*, (April 2022) (ISSN: 0972-8287), Publisher: *Vijnana Bharati*
12. **Science behind Festival of Colors**, *Science India*, (March 2022) (ISSN: 0972-8287) Publisher: *Vijnana Bharati*
13. **A Story of Selfless Pursuit of Chemistry: Prof. T R Seshadri**, *Science India*, (Feb. 2022) (ISSN: 0972-8287) Publisher: *Vijnana Bharati*
14. **Popular writing: Revolutionary in the garb of a Scientist** (Aug. 2021)
Magazine: *Science India Collector's Edition*, (ISSN: 0972-8287) Publisher: *Vijnana Bharati*.
(The coffee table book version of this edition was also given to all the thousands of participants at India International Science Festival, Goa, 2021. Translated into Hindi and Marathi too)
15. **Book: The legendary Acharya Prafulla Chandra Ray**. (Aug. 2021)
Publisher: VVM Publications, Delhi
(The book was released by **Dr. Subhas Sarkar**, Hon'ble Minister of State for Education, GoI and was part of syllabus of India's Largest Science talent examination of *Vidhyarthi Vigyan Manthan* (Vigyan Prasar, NCERT, *Vijnana Bharati*. The book has been **translated into 11 Indian languages**)
16. **Drafting member** of KalaCakra, Luni-Solar calendar based on Indian calendar system released by CSIR-NIScPR and *Vijnana Bharati*. (April 2021)
17. **Master of Nitrites: Prafulla Chandra Ray**, *Curiosity*, (August 2020) Publisher: *Vigyan Prasar* (DST)
18. **Eco mark-The Indian Environment-friendly certification**, *Scientific India Magazine*, (2019) Publisher: *Scientific India*
19. **Genetic Pollution: Causes and Effects**, *Everyman's Science*, (2018) Publisher: Indian Science Congress Association.
20. **Plastic Eating Bacteria: A Fuel to Recycling Revolution**, *Scientific India*, (2017), Publisher: *Scientific India*
21. **Nutraceuticals: Are They a Possible Alternative to Pharmaceuticals?** *Scientific India*, (2017) Publisher: *Scientific India*
22. **Health Goals: From Illusion to Reality**, *Scientific India*, (2017) Publisher: *Scientific India*
23. **National Coordinator**, *India International Science Festival (IISF 2025)*, Panchkula, Haryana (2025).

24. **Coordinator**, *India International Science Festival (IISF 2024)*, RCGB, Faridabad (2024).
25. **Coordinator**, *India International Science Festival (IISF 2023)*
Artisans Technology Village: Vocal for Local, MANIT, Bhopal (21-24 January, 2023).
26. Convener, **International Conference on Contributions of Jagdish Chandra Bose: A Satyagrahi Scientist**, organized in collaboration with Vijnana Bharati, Inter-University Accelerator Centre, and Ministry of Culture (20 Nov.-01 Dec. 2022).
27. Convener, **International Conference on Contributions of Acharya Prafulla Chandra Ray as a Chemist and Freedom Fighter** organized in collaboration with Vijnana Bharati, University of Delhi and Ministry of Culture (2-3 August 2022).
28. **Invited Speaker**, “From the annals of History: Science and Technology”, as part of *Vigyan Sarvatra Pujyate Programme* (PSA, GoI, DST) Gurukul Kangri Vishwavidyalaya, 23 February 2022.
29. **Session Chair**, Theme 4: **Intellectual Colonialism and Freedom Movement**, *International Conference on “Role of Indian Science in Freedom Movement”*, (RISFrem-2022), (28th Feb. & 1st March, 2022), JNU.
30. **Convener** initiated the **#VaigyanikChai** forum for *Undergraduate students of Delhi University*, an initiative of Indraprastha Vigyan Bharati as part of Azadi ka Amrit Mahotsava to understand the role and contributions of Indian scientists in Independence Movement. Two Orientation Workshops were also organized for Teachers and Students of Delhi University. The forum has presence as Podcast Channel (Spotify), YouTube and other Social places. (2021)
31. **Coordinator**, *India International Science Festival (IISF 2021)*, **Traditional Crafts and Artisans Festival**: Understanding the Science behind Indian handicrafts and handlooms, Goa (2021).
32. **Online Interview**: *Ek Vaigyanik ki aad mein Krantikari: P C Ray*; In Vigyan ki Kitab episode of Dyau SciComm (August 29, 2021)
33. **Organizing Committee Member**, *National Conference of Science Communicators & Science Teachers, Indian Independence Movement & the Role of Science*, November 29-30, 2021, CSIR-NIScPR, New Delhi.
34. **Invited Speaker**: “Scientific Heritage: Foundation for shaping Modern India”, (Online), Seth N M T Govt. Girls College, Jhunjhunu (2021)
35. **Invited talk**: *Life Story of Acharya Prafulla Chandra Ray*, Recorded talk for Vidhyarthi Vigyan Manthan participating students (November 22, 2021)

36. **Panel Expert**, Socio-political & Economic Canvas Reflected in Biographies of Scientists: Prafulla Chandra Ray and Madam Marie Curie: Two contemporaries, **International Science Literature Festival-Vigyanika**, IISF 2020, 23/12/2020.
37. **Invited Talk**: “*Our Scientific Heritage: Told, Untold*”, for Integrated Talent Development Mission (ITDM) Trust, (June 5, 2020).
38. **Coordinator**, *India International Science Festival* (IISF 2020), **Congress of the History of Science in India**, (Online), Delhi (2020). This conference and concept was introduced for the first time in IISF and received huge response and immense participation.
39. Invited as **Chief Guest**, Career Fair 2019, Delhi International School, Delhi, 30 Sept. 2019.
40. **Coordinator**, *India International Science Festival* (IISF 2019), Traditional Crafts and Artisan Meet & Expo, Kolkata (2019).
41. **Coordinator**, *India International Science Festival* (IISF 2018), **Traditional Crafts and Artisan Meet & Exposition**, Lucknow (2018). This conference and concept for understanding the science involved in making of Indian handicrafts and handlooms and making scientific interventions was introduced for the first time in IISF, Lucknow
42. **Panel of Judges**, Gyan-Vigyan Mela 2017-18, New Delhi
43. **Invited talk**: Ways to be a successful Student Entrepreneur, Keshav Mahavidhyalya, University of Delhi, 13 October 2017.

TALKS AT INTERNATIONAL CONFERENCES & AWARD

- **47th IUPAC World Chemistry Congress, Paris, France** (6-12 July 2019)
Trimetallic Ti-V-(M) nanocomposites (TMONCs) by Sol-Gel route: Synthesis, Characterization and Electronic properties. (International travel award by UGC)
- **42nd IUPAC CONGRESS, Glasgow, UK** (2-7 August 2009)
Organotin (IV) Complexes of thiohydrazones of phenethylamine: Synthesis, Characterization, biological, thermal, corrosion and XRD studies. (International travel award by UGC)
- **Awarded: Dr. M.D. Karkhanavala Award 2006**
15-THERMANS, Indian Thermal Analysis Society (Bhabha Atomic Research Centre), Jaipur, India; “*Recent Advances in the Thermal Analysis of Polymer Materials*”.
- **40th IUPAC CONGRESS; Beijing, China** (14-19 August, 2005)
Biological Aspects, Corrosion Inhibition, Thermal & Spectral Characterization of Some Synthesized Organotin (IV) Coordination Compounds. (International travel award by DST)

- **Santa Fe, USA** (June 25-July 1, 2004), **IUPAC XI–International Conference on Coordination and Organometallic Chemistry of Germanium, Tin and Lead** *Organotin (IV) Complexes of Thiohydrazides & Thiohydrazones: Synthesis, Characterization and Thermal Study*. (<http://www.gtl-xi.utep.edu/>) (International travel award by CSIR)

2026

114. **Invited Guest, International Conference on “Mahakala: The Master of Time**, 3-5 April 2026, Ujjain, organized by Madhya Pradesh Council of Science & Technology, Science & Technology Department, Government of Madhya Pradesh, Indian Knowledge Systems Division, Ministry of Education, Government of India, and Vijnana Bharati (VIBHA)
113. **Joint Treasurer, International Conference on “CBRNE Related Threats to National Security and Safety: Antiterrorism Measure for Safe Environment (ICCTNSS-2026)”** organized by the Department of Chemistry, University of Delhi, in association with Dyal Singh College, the National Association for Chemical Security, and the School of Open Learning, University of Delhi, Vice-Regal Lodge, University of Delhi.
112. **Coordinator, National Science Day 2026**, Vigyan Bhawan, New Delhi, organized by DST, INSA. (28 February 2026).
111. **Expert**, Chemical Sciences, 41st Madhya Pradesh Science Congress, MPCST, Bhopal, 26-28 February 2026.

2025

110. **Expert, Science Communication Conference on Public Understanding of Quantum Science & Technology**, Science City, GUJCOST, Ahmedabad (December 2025)
109. **PC Ray Memorial Lecture: Unveiling Hindu Chemistry: Introducing the Scientific Heritage of Ancient India to the World**, Chaudhary Brahm Prakash Ayurved Charak Sansthan (CBPACS), New Delhi (02 August 2025)
108. **Invited talk: Rich Tradition of Indian Knowledge System in Context of Chemical Sciences**, 3rd International Conference on “Advanced Functional Materials and Devices (AFMD-2025)” ARSD College (3-5 March 2025).

2024

107. **Keynote Speaker, “From Lab to Life – Making Science accessible and relatable”**, 4th International Science Communication Conference 2024 (19-20 December 2024)
106. Jury Member, INSPIRE-MANAK Awards, DST
105. Two Weeks Online Training Programme on “NEP 2020 Orientation & Sensitization Programme”, (01– 14 January, 2024), MM-TTP UGC & MH-MMTTC, Hansraj College, University of Delhi

2023

104. **Chairperson**, Offline Oral Presentation Session, International Conference on Integrative Chemical Science for Health & Environment-2023 (ICHE-2023), 6-8 October **2023**, Deshbandhu College, University of Delhi.
103. **Expert**, One Week One Lab, “Science Communication: Public Engagement with Science”, CSIR-NIScPR, New Delhi (14/09/2023)
102. **Resource Person**, History of Hindu Chemistry, "Jeevan aur Rasayan" Chemistry in Everyday Life: Short Term Online Certificate Course, Ramjas College, University of Delhi, 20th June 2023.
101. **Resource Person**, 21st Annual Convention, Indian Association of Physics Teachers (IAPT), Goa Regional Council, Carmel College of Arts, Science and Commerce for Women, Goa, 15th April 2023.
100. **Chairperson**, Material Science session, International Conference on Interdisciplinary Research in Technology & Management, IRTM 2023 (20-22 April 2023)

2022

99. **Resource Person**, Revolutionaries of India: Scientists and Freedom Fighters, National Virtual Conference on Azadi ka Amrit Mahotsava: Past Present and Future of Indian Sciences, University of Mumbai, Mumbai (30 July 2022)
98. **Resource Person**, स्वतंत्रता आंदोलन और विज्ञान, SRIJAN Internship sessions, Vidhyarthi Vigyan Manthan, ICGEB, Delhi (28 July 2022)
97. **Resource Person**, “*Unequal Distribution of Consumption of natural resources*”, FDP on “Recent Trends in Applied Sciences”, MAIT, Delhi (25 July 2022).
96. **Resource Person**, "Literature Survey", A short Term Online Course on RESEARCH METHODOLOGY IN CHEMISTRY, “Upskill Yourself” with Research Methodology in Chemistry-2022. (09 June 2022)
95. **Resource Person**, *Unequal Distribution and Consumption of Natural Resources (with reference to human health)*", in the Two Week Online Interdisciplinary Refresher Course in Environment on 'Environment and Human Health', 1st April 2022, Teaching Learning Centre, Ramanujan College.
94. **Session Chair**, Theme 4: Intellectual Colonialism and Freedom Movement, *International Conference on “Role of Indian Science in Freedom Movement”*, (RISFrem-2022), (28th Feb & 1st March, 2022), JNU.
93. **Organizing Committee Member**, *International Conference on “Role of Indian Science in Freedom Movement”* (RISFrem-2022), (28th Feb & 1st March, 2022), JNU.

92. **Invited Speaker**, From the annals of History: Science and Technology, Vigyan Sarvatra Pujyate Programme, Gurukul Kangri Vishwavidyalaya, 23 February 2022.

2021

91. **Coordinator**, *India International Science Festival (IISF 2021)*, Traditional Crafts and Artisans Festival, Goa (10-13 December 2021).
90. **Organizing Committee Member**, *National Conference of Science Communicators & Science Teachers, Indian Independence Movement & the Role of Science*, November 29-30, 2021, CSIR-NIScPR, New Delhi.
89. **Invited Speaker**: Scientific Heritage: Foundation for shaping Modern India, (Online), Seth N M T Govt. Girls College, Jhunjhunu (2021)

2020

88. **Panel Expert**, Socio-political & Economic Canvas Reflected in Biographies of Scientists, International Science Literature Festival-Vigyanika, IISF 2020, 23/12/2020.
87. **Coordinator**, *India International Science Festival (IISF 2020)* Congress of the History of Science in India, (Online), Delhi (22-25 December 2020).
86. **Organizing Committee Member**, National Webinar on “National Education Policy in the Light of Science Education in India”, 28/10/2020.
85. **Advisory Committee Member**, National Seminar on Environment & Sustainability in the Third World, **Hansraj College**, Delhi University (2020).
84. Two weeks' Faculty Development Program on "ICT Based New Paradigms of E-Teaching and E-Learning: Digital Pedagogy", PMMMNMTT, Ramanujan College, University of Delhi (15-30 September 2020)
83. Two Week Online Faculty Development Programme on Research Methodology, PMMMNMTT, Ramanujan College, University of Delhi, (1-15 Oct. 2020).
82. One Week Online Faculty Development Programme on “Research Methodology: Tools & Techniques”, ARSD College (5-11 June 2020).
81. One Week National Workshop on “Emerging Trends in Science and Technology: Issues in these Unprecedented Times”, SLC, DU, 4-8 August 2020.
80. One-week Online Certificate Training on "How to Protect Intellectual Properties", BLDIRL, 13-18 July 2020.
79. National Webinar on “Rural Based Start-up and Entrepreneurship, Sanitary Product Manufacturing and Entrepreneurship Development”, UBA, The Maharaja Sayajirao University of Baroda, SVNIT, Surat (13/5/2020)

78. Webinar Series (Professional) on “Transforming Teaching-Learning Process using ICT Tools” organized by PGDAV College, University of Delhi, (28-30 August, 2020).
77. International webinar on status of Titration after COVID 19, ARSD College, (7/5/19)
76. One Professional Development Hour by attending IEEE Electron Device Society (EDS) Distinguished Lecture (DL) on Phase change electro-optical devices for space applications organized by IEEE and DU (May 12, 2020).
75. Webinar on “Art and Science of Mentoring”, DRC, DU (1/6/20).
74. Webinar on “Cyber Security Awareness”, ARSD College (26/4/20).
73. National Webinar on Research Methodology: An overview, ARSD College (12/5/20).
72. Webinar on communicating science to the citizen during the COVID 19 pandemic, NCSTC, DST and GUJCOST (11/5/20).
71. National Webinar on Revisiting Gramsci and Althusser, ARSD College, (12/5/20).
70. Webinar on virus free veggies and fruits: Sanitizing the organic way, NCSTC, DST and GUJCOST (10/5/20).
69. International Webinar on Advertising Industry: Past, Present and Future, ARSD College, 9 May, 2020.
68. International Webinar on Artificial Intelligence, ARSD College, 29/5/20.
67. Webinar on S&T intervention in fighting COVID-19 pandemic, NCSTC, DST and GUJCOST (15/5/20).
66. Webinar entitled “Molecular Visualization Series I” on Learning Chemistry through ODYSSEY Software, Hindu College, DU (6/4/20).
65. One day webinar on therapeutic applications of Ayurveda, naturopathy and homeopathy in COVID-19, AN University, Department of AYUSH, Andhra Pradesh (15/5/20).
64. National webinar on achieving excellence in higher education in India in the 21st century: Challenges and Opportunities, Sharda University (3/6/20).
63. Online Refresher Course in Chemistry for Higher Education Faculty, ARPIT-SWAYAM, MHRD (1 September – 31 December 2019).
62. Sol-gel synthesis of SnO₂-Al₂O₃ nanocomposites and its application in gas adsorption (Poster), National Conference on “New Trends in Nanotechnology and Applications, ARSD

College, 6-7 Feb. 2020.

61. Morphological and structural investigation of alumina nanoparticles synthesized via sol-gel technique (Poster), National Conference on “New Trends in Nanotechnology and Applications, ARSD College, 6-7 Feb. 2020.

2019

60. **Coordinator**, *India International Science Festival (IISF 2019)*, Traditional Crafts and Artisan Meet & Expo, Kolkata (05-08 November 2019).
59. Removal of cationic dyes from wastewater by bentonite/calcium alginate composites, (Poster), 1st National Agrochemicals Congress: Country’s Status on Various Fronts of Agrochemicals”, 13-16 Nov. 2019.
58. **47th IUPAC World Chemistry Congress, Paris, France** (6-12 July 2019), Trimetallic Ti-V-(M) nanocomposites (TMONCs) by Sol-Gel route: Synthesis, Characterization and Electronic properties. (Poster) (International travel award by UGC).
57. International Year of Periodic Table, International Short Term Certification Course, IYPT 2019 India Program.
56. **Programme Committee Member**, Organizing Member, Tech4Seva 2019 Conference, IIT-Delhi (10-12 August 2019).
55. Surfactant modified Bentonite for efficient dye removal, (Poster), Tech4Seva Conference, IIT-Delhi, (10-12 August 2019)

2018

54. **Coordinator**, *India International Science Festival (IISF 2018)*, Arts and Crafts Demo, Lucknow (05-08 October 2018)
53. Decontamination of wastewater utilizing modified Bentonite, India International Science Festival, Lucknow (Poster) (5-8 Oct. 2018).
52. Evaluation of Platinum complexes as potential anticancer agents, India International Science Festival, Lucknow (Poster) (5-8 Oct. 2018).
51. Total plant-based polyamide from bark of Cinnamon, India International Science Festival, Lucknow (Poster) (5-8 Oct. 2018).

2017

50. Faculty Development Programme on Multifunctional Materials for Energy Harvesting and Allied Devices, ARSD College, Delhi University (10 November 2017).
49. Enviro-Health Conference 2017, New Delhi (02 Nov. 2017).

48. Attended Workshop on University Enterprise Architecture Framework, National Informatics Centre, New Delhi (24 October 2017).
47. Refresher Course in Climate Change and Disaster Management, CPDHE (9-30 June 2017).
46. STEM Teacher Training Workshop on Research Based Pedagogical Tools (RBPTs) January 23-25, 2017 at IISER, Mohali.
45. Polymeric carrier molecules based Nanoshell formulation of drug, National Conference on “Clean & Green Energy: The Chemical & Environmental Aspects, BCAS, DU (16-17 Feb 2017). (Poster).
44. Synthesis of total bio-based polyamide from 4-aminocinammic acid, National Conference on “Clean & Green Energy: The Chemical & Environmental Aspects, BCAS, DU (16-17 Feb 2017). (Oral)

2016

43. Training Programme in Science Communication, Centre for Science Education and Communication, University of Delhi, 20-22 December 2016.
42. Green Synthesis and characterization of AgNP's using extract of medicinal plant *Combretum indicum*, Ritu dhara, A Kumar, G Bahuguna, NK Mishra, P Chaudhary, **Rajeev Singh**, International Conference on Green Chemistry in Environmental Sustainability and Chemical Education (ICGC-2016), Daulat Ram College, University Of Delhi (November-2016) (Poster).
41. Study of Platinum (II) complexes with biologically active ligands, Little, S S Gupta, R Sharma, A Kumar, P Chaudhary, **Rajeev Singh**, International Conference on Green Chemistry in Environmental Sustainability and Chemical Education (ICGC-2016), Daulat Ram College, University of Delhi (November-2016) (Poster).
40. Synthesis and characterization of complexes of Gold(III) with dithiocarbamates (DTC), Pooja, S S Gupta, A Kumar, P Chaudhary, **Rajeev Singh**, International Conference on Green Chemistry in Environmental Sustainability and Chemical Education (ICGC-2016), Daulat Ram College, University of Delhi (November-2016) (Poster).
39. Green synthesis of gold nanoparticles using aqueous petal extract of medicinal plant *Combretum Indicum* and its characterization, A Kumar, R Sharma, R Kumar, S Singh Chauhan, P Chaudhary, **Rajeev Singh**, International Conference on Green Chemistry in Environmental Sustainability and Chemical Education (ICGC-2016), Daulat Ram College, University of Delhi (November-2016) (Oral)
38. Nanoporous alumina and mixed oxides alumina nanoparticles synthesis and its characterization, N K Mishra, A Kumar, M Bhatt, R Kumar, P Chaudhary, **Rajeev Singh*** (ORAL), National conference on Nanoscience - Opportunities and

Challenges, Maitreyi College, University of Delhi (February, 2016)

37. Ultra-high performance and photo-functional bio/semi-biobased polyimides from 4-aminocinnamic acid, A Kumar^{*}, K Yasaki¹, S Tateyama¹, Naoki Takaya², Rajeev Singh, Tatsuo Kaneko¹ (ORAL); National conference on Nanoscience - Opportunities and Challenges, Maitreyi College, University of Delhi (February, 2016)
36. Synthesis of TiO₂-Al₂O₃/SnO₂ nanomixed metal oxides via sol-gel route and their structural Investigation (Poster), Nishtha Yadav¹, Amit Kumar², Neeraj K Mishra³, Pratibha Chaudhary⁴, **Rajeev Singh**^{3*} National conference on Nanoscience - Opportunities and Challenges, Maitreyi College, University of Delhi (February, 2016)
35. Green Synthesis of silver nanoparticles using aqueous plant extract as a reducing agent, Gaurav Bahuguna¹, Amit Kumar², Neeraj K Mishra³, Pratibha Chaudhary⁴, **Rajeev Singh**^{3*} National conference on Nanoscience - Opportunities and Challenges, Maitreyi College, University of Delhi (February, 2016)
34. Structural determination of xSnO-Al₂O₃ nanomixed metal oxide synthesized via sol-gel route, Monica Bhatt, Amit Kumar, Neeraj K Mishra, Pratibha Chaudhary, **Rajeev Singh** National conference on Nanoscience - Opportunities and Challenges, Maitreyi College, University Of Delhi (February, 2016)

2015

33. Structural investigation of alumina nanoparticles synthesized via sol-gel technique (**Poster**), NK Mishra, M Bhatt, A Kumar, C Kumar, P Chaudhary and **Rajeev Singh**^{*}, 3rd Indo-UK conference on Recent Advances in Chemical Sensors, Gargi College, University of Delhi (NK Mishra won **second prize** in poster presentation) (25th -26th Aug 2015)
32. Structural investigation of alumina nanoparticles synthesized via sol-gel technique (**Poster**), NK Mishra, A Kumar, C Kumar, P Chaudhary and **Rajeev Singh**^{*}, 3rd National Conference on Nanoscience and Instrumentation Technology (NCNIT-2015), NIT-Kurukshetra, Haryana, India (6-7 June 2015).
31. Synthesis of alumina and mixed oxides alumina nanoparticles via sol-gel technology (Oral), NK Mishra, A Kumar, C Kumar, P Chaudhary and **Rajeev Singh**^{*}, 3rd National Conference on Nanoscience and Instrumentation Technology (NCNIT-2015), NIT-Kurukshetra, Haryana, India (6-7 June 2015).
30. Morphological and structural investigation of alumina nanoparticles synthesized via sol-gel technique (**Poster**), NK Mishra, A Kumar, C Kumar, P Chaudhary and **Rajeev Singh**^{*}, 3rd National Conference on Nanoscience and Instrumentation Technology (NCNIT-2015), NIT-Kurukshetra, Haryana, India (6-7 June 2015).
29. High performance and photo-functional polyimides from 4-aminocinnamic acid via synthesis of 4,4'-diaminostilbene (Oral), A Kumar, K Yasaki, S Tateyama, N Takaya, **Rajeev Singh** and T Kaneko, 9th National Conference on 'Solid State Chemistry and Allied Areas (ISCAS-

2015), University of Delhi (8-10 May 2015), (**Amit Kumar awarded with Endowment Award**)

28. Synthesis, characterization and morphological study of mixed Sn-Al oxide nanocomposites (Poster), C Kumar, A Kumar, NK Mishra, P Chaudhary, **Rajeev Singh***, 9th National Conference on 'Solid State Chemistry and Allied Areas (ISCAS-2015), University of Delhi (8-10 May 2015).
27. Synthesis and characterization of alumina nanoparticles via sol-gel technique (Poster), NK Mishra, C Kumar, A Kumar, P Chaudhary and **Rajeev Singh***, 9th National Conference on 'Solid State Chemistry and Allied Areas (ISCAS-2015), University of Delhi (8-10 May 2015).
26. Two –Day Workshop on Computational Methods in Drug Discovery, Miranda House, University of Delhi (16-17 April 2015)
25. 2nd Indo-German Workshop on Supramolecular Chemistry, University of Delhi (30/03/2015)

2014

24. Two weeks Faculty Development Programme on Frontiers in Chemical and Polymer Sciences (Under TEQIP-II), Delhi Technological University, New Delhi (15-26 Dec. 2014).
23. International Conference on Electron Microscopy and XXXV Annual Meeting of the Electron Microscope Society of India, University of Delhi, (July 2014).
22. Seminar on Microscopic Techniques, Indian Society of Analytical Scientists, New Delhi (26 June, 2014).
21. Attended 1st International Conference on Emerging Trends of Nanotechnology in Drug Discovery, University of Delhi (26-27 May 2014).
20. Synthesis and characterization of tin oxide (SnO₂) nanoparticles via the sol-gel method, National Conference on Recent Trends in Chemical Sciences, Manipal University, Jaipur, (February, 2014).
19. Synthesis and characterization of thioamides via bio-available amino acids and their metal complexes (Oral), NK Mishra, N Yadav, P Chaudhary and **Rajeev Singh***, National Conference on Recent Trends in Chemical Sciences, Manipal University Jaipur 21-22 (February, 2014).
18. Synthesis and characterization of tin oxide (SnO₂) nanoparticles via the sol-gel technique, International Conference on Recent Trends and Innovations in Science and Technology, Pattaya, Thailand (November 08-09, 2014). (ICRTIST-2014-5066, Oral, accepted but not presented).

2013

17. D-LITE Digital Literacy and Innovation for Tomorrow's Education for teachers, Campus of Open Learning in association with Edinburgh College, Scotland under UKIERI (18-21 November 2013).

16. Attended *Project Monitoring Session* of Chemical of Organic & Medicinal Chemistry & Chemical Technology Research Committee, CSIR Complex, New Delhi (**2013**).

2012

15. UGC- Workshop on Disaster Management, Centre for Professional Development in Higher Education (UGC-ASC), University of Delhi (20-22 December **2012**).
14. Northern Regional Science Congress Science for Shaping the Future of India, Indian Science Congress Association, New Delhi (26 - 27 November **2012**).
13. National Workshop on “Basics and Applications of Spectroscopic Techniques”, ISAS-KMC, New Delhi (5-6 October **2012**).
12. Orientation Programme, Centre for Professional Development in Higher Education (UGC-ASC), University of Delhi (6 August- 5 September **2012**)
11. Panel Of Judges (Biochemistry Section), 1st International Scientific e-Conference on Multidisciplinary Research (**2012**)
10. Third Science Conclave: A Congregation of Nobel Laureates, IIIT, Allahabad (08-14 December 2010)
9. ILL-LL-Microsoft Workshop, ICT Workshop for Capacity Building of Delhi University faculty, (17-28 August 2009)
8. National Seminar on Recent Development in Polymers, Bhaskaracharya College of Applied Sciences, University of Delhi (2009)
7. International Conference on Sustainable Development and Resource Utilization: Current Trends and Perspectives, Jaipur, INDIA, Studies on some Organotin (IV) thiohydrazone Complexes (Poster Presentation, September 2005).
6. 95th Indian Science Congress Association, Visakhapatnam (2008).
5. IUPAC-2nd International Symposium on Green/Sustainable Chemistry, New Delhi (2006).
5. 41st Annual Convention of Chemists of Indian Chemical Society (ICS) (2004), New Delhi.
3. 5th Annual Symposium on Frontiers in Biomedical Research (2004), New Delhi, INDIA.
2. 14th National Symposium and Workshop on Thermal Analysis (THERMANS-2004) Department Of Atomic Energy-Board of Research in Nuclear Sciences, Baroda, INDIA.
1. The National Symposium on the Recent Advances in the Methods of Chemical Analysis in Industry and Environment, Bhagalpur (2003).

Organization of Conferences/ Symposia/ Lectures/ Visits

- **Advisory Board Member**, International Conference on Integrative Chemical Science for Health & Environment-2023 (ICHE-2023), 6-8 October **2023**, Deshbandhu College, University of Delhi.
- Convener, **International Conference on Contributions of Acharya Jagdish Chandra Bose: A Satyagrahi Scientist**, organized by Vijnana Bharati, IUAC, Delhi and Ministry of Culture (30 Nov.-01 Dec. 2022).
- Convener, **International Conference on Contributions of Acharya Prafulla Chandra Ray as a Chemist and Freedom Fighter** organized by Vijnana Bharati, University of Delhi and Ministry of Culture (2-3 August 2022).
- Convener, **Women for Science: Science for Women** (9 Feb-8 March 2018): Conference and medical camps: Highlighting the Challenges and Opportunities for Women in Science organized in collaboration with Vijnana Bharati and JNU.
The event was highlighted and mentioned at the **United Nations** by **Princess Nisreen El-Hashemite**, Ambassador of the programme.
- Convener, **Outreach Programme for School students** for promotion of Science.
Students from various Government schools were invited for a day long hands on training and experimental workshops. *GBSSS, Mandoli (2019), Govt. School, Rajouri Garden (2017-18); BCV Senior Sec. School (2015-16)*
- Convener, **Hands on Scientific Software Training and Awareness program** (STP- I, 2015), (STP-2, 2016) (STP-3, 2016), (STP- 4, 2017), (STP- 5, 2017) for training ***Undergraduate students and Non-teaching staff***. The participants were trained in softwares like ChemDraw, HyperChem, Mathematica, Office etc.
- Convener, One Week Faculty Development Programme on Sustainable Development (2018).
- Coordinator, Workshop on Molecular Modeling and Drug Designing (23 Jan. 2018)
- Convener, Workshop on Green Chemistry (2017-18).
- Convener, Workshop on Glassware Apparatus Handling (2017-18).
- Convener, One Day Workshop on Archival Sciences (2017-18).
- Convener, Workshop on Scientific Writing and Communication (WSWC-1)
- Convener, Nuclear4Climate event in association with Indian Youth Nuclear Society and Indian Nuclear Society.
- Convener, Popular lecture series (2014-15): Invited International speakers: Prof. Raman Uppal, Edhec Business School, London, Mayank Malik, CEO, Citibank, Jordan, Dr. Stephen Barton, Kingston University, London

- Convener, Two day Popular Lecture Series Workshop on the Theme of Foundation Courses under the newly introduced Four Year Undergraduate Program of University of Delhi, ARSD College (16-17 January 2014).
- Convener, ChemCrown 2014, Chemistry promotion festival (10 -11 February 2014).
- Convener, ChemCrown 2010-11, Chemistry promotion festival. Was accepted as the official programme of International Year of Chemistry 2011.
- Convener, Educational visits to CPCB, (2019); Yakult, Mother Dairy, ONGC (2017-18), Biodiversity Parks, DJB, Sonia Vihar (2015-16)

ADVISORY/ EDITORIAL BOARD

1. Editor Board Member, Heliyon Journal, Elsevier (2019-2020)
2. Member, Journal of Biomedical Sciences (*JBS*)
3. Editor, International Journal of Energetic Materials (*JournalsPub*) (2017-18)
4. Editor Member, International Journal of Chemical Synthesis and Chemical Reactions (*JournalsPub*) (2017-18)
5. Member, International Journal of Advances in Engineering & Technology (*IJAET*)
6. Advisory board, International Journal of Chemical Research

REVIEWER FOR JOURNALS

1. Journal of Physics and Chemistry of Solids (*Elsevier*)
2. Material Research Innovation (*Taylor & Francis*)
3. Applied Organometallic Chemistry (*John Wiley & Sons*)
4. Central European Journal of Chemistry (*Versita Sp.*)
5. Spectrochimica Acta-A: Molecular and Biomolecular Spectroscopy (*Elsevier*)
6. Medicinal Chemistry Research (*Springer*)
7. Eurasian Journal of Physics and Chemistry Education (*EJPCE*)
8. Polyhedron (*Elsevier*)
9. Journal of Molecular Structure (*Elsevier*)
10. Journal of Sulfur Chemistry (*Taylor & Francis Group*)
11. African Journal of Pure and Applied Chemistry (*Academic Journals*)
12. International Research Journal of Pure and Applied Chemistry (*Sciencedomain International*)
13. E-International Scientific Research Journal
14. Global Journal of Science Frontier Research
15. World Applied Science Journal
16. American Chemical Science Journal
17. Pinnacle Pure & Applied Chemistry

PROFESSIONAL AFFILIATIONS

1. National Association for Chemical Security (NACS-85), (2026)
2. Asian Council of Science Editors (Membership No: 24261295) (2025)
3. **Secretary**, Indraprastha Vigyan Bharati (Delhi Chapter of Vijnana Bharati) (2022-Present)
4. **Member**, Society of Biological Inorganic Chemistry (SBIC) (25302)
5. **Fellow** of Society of Earth Scientists (F/317)
6. **Executive Member**, Indraprastha Vigyan Bharati (2019-22)
7. **Member**, International Chemical Biology Society (ICBS) (20110176)
8. **Life member**, Vijnana Bharti (#7455)
9. **Life member** of The Indian Science Congress Association (ISCA) (L15305)
10. **Life member** of Material Research Society of India (MRSI) (LMB 1562)
11. **INSA-IUPAC** Young affiliate member (2016-17, 2014-15, 2013-14, 2012-13)
12. **Associate Member**, Royal Society of Chemistry (AMRSC) (525292)
13. **Life member** of Indian Thermal Analysis Society (ITAS) (LM-353).
14. **Life member** of Indian Society of Analytical Scientists (ISAS) (LMT-2010/23)
15. **Life member**, Indian Association of Solid-State Chemists and Allied Scientists (ISCAS) (LM 401)
16. **Life member**, Society for Materials Chemistry (LM877)
17. **Member** of International Association of Engineers (IAENG) (Membership No. 105975)
 - a. The IAENG Society of Chemical Engineering
 - b. The IAENG Society of Industrial Engineering

Innovations in Teaching Pedagogy

- On my personal website, I have hosted a separate webpage for the students which have links to various resources, scholarships, lecture notes, tutorials and software. (http://people.du.ac.in/~rajeev/index_files/Page730.htm), (<https://www.rajeevsingh.org/student-resources>). I have made PowerPoint presentations for most of the topics since it is easier to visualize to students the various concepts of chemistry using animation. The movement of electrons and various other theories are easily explainable using animation. (I have been teaching using this methodology long before this online method came into use recently.)
- Running a blog where educative and interesting articles are posted and shared with the students. (<http://rajeevkh14.blogspot.in/>) (www.rajeevsingh.org)
- Toolbar for students for installation on webpages. It contains easy access link and sections to various chemistry related topics, scholarships, databanks etc. (<http://chemcrown.ourtoolbar.com/>)
- Designed, Created and maintaining STAR College website (<http://arsdstar.wix.com/starcollege>) and CIEL website (<http://arsdstar.wix.com/ciel>)
- Group of students are formed at the beginning of every new session where I share notes, additional information and assignments and question bank. It is easily accessible to them

since most of them use Smartphone's, tablet and computers nowadays and help saves paper too.

INNOVATIONS/ DEVICES

- Design and Development of an Economical, **Non- Electrical, Physically driven Reverse Osmosis Machine** for Rural Population living in Rural and Backward Areas.
- The device was reported by **Hindustan newspaper** and also presented and appreciated by Shri Giriraj Singh, Minister for MSME



ADMINISTRATIVE CONTRIBUTIONS

1. **Member Secretary/ Incubator Manager:** Played a pivotal role in establishing the Technology Business Incubator, Centre for Innovation and Entrepreneurial Leadership (CIEL) with support from Ministry of Small, Medium Enterprise (MSME) GoI. (2015-21)
2. **Member Secretary/ Overall Coordinator:** STAR College Scheme, Department of Biotechnology, GOI. Established the DBT Science Centre for students and faculties with instrumentation facility (2015-20).
3. **Convener**, Chemical Society,. Introduced the #ChemCrown: Talk of Eminence Series and #InsiderTalk series and invited eminent speakers like Dr. Kumar Krishen (NASA) and others (2022-23, 2021-22).
4. **Member**, *Department Research Committee (DRC)*, Department of Chemistry, University Of Delhi. (2019-20, 2020-21).
5. **Representative of Nearby Incubation centre; MHRD's Innovation Cell, Hansraj College**, Delhi University (2018-19)
6. **External Examiner**, Dept. of Chemistry, CCS University, Meerut (2019, 2020)
7. **Governing Body Member**, ARSD College (2018-19)
8. Member, Faculty-Student committee, Department of Chemistry (2017-18).
9. **Teacher Incharge**, Department of Chemistry, ARSD College, University of Delhi (2016-17).
10. Member, Website committee (2016-17).
11. Member, Women's Development Cell (WDC) (2017-18, 2016-17, 2014-15, 2013-14).

12. *Centre for Innovation and Entrepreneurial Leadership (CIEL)*: **Successfully represented** the college to Ministry of Micro, Small and Medium Enterprise (MoMSME), GOI and brought the technology business incubation centre at the college (March 2015 - 2021).
13. **Secretary**, Staff Association (2015-16).
14. **Member Secretary**, *Star College Scheme Advisory Board (ARSD)*, Department of Biotechnology, GOI, **successfully represented** the college at Department of Biotechnology, GOI and got the STAR status for four departments (December 2014- 2020).
15. **Convener, Popular lecture series (2014-15)**, Invited International speakers like Prof. Raman Uppal, Edhec Business School, London; Mr. Mayank Malik, CEO, Citibank, Jordan; Dr. Stephen Burton, Kingston University, London for lectures at the college.
16. Secretary, Staff Association, ARSD College (2014-15).
17. Convener, Local Screening Committee, Proposals for DUCIC-TBI
18. Deputy Superintendent, Examination (May 2014, December 2014)
19. Member, Placement Cell
20. Member, Students Union Advisory Committee
21. Member, Fee Concession and Student's Aid Fund Committee
22. Member, Monitoring committee, DUSU and College Students' Union Election
23. Member, Grievance Committee for Admissions
24. Member, Anti-Ragging Committee
25. Member, Admission Committee
26. Convener, Two day Popular Lecture Series Workshop on the Theme of Foundation Courses under the newly introduced Four Year Undergraduate Program of University of Delhi, ARSD College (16-17 January 2014).
27. Convener, ChemCrown 2014, Chemistry Society festival (10 -11 February 2014).
28. Administrator, Official page of ARSD College on Facebook.
29. Member, Foundation Course Coordination Committee, 4YUP
30. Incharge, Seminar Committee, Department of Chemistry, ARSD College
31. Member, Placement cell
32. Member, Antardhwani committee
33. Member, Fine arts and crafts society, ARSD College
34. Member, Discipline Committee
35. Member, Admission committee

36. Member, Biometric System of Attendance Committee
37. Member, Grievance Committee for redressal of Grievances relating to under-graduate admissions
38. Member, Anti-ragging committee
39. Member, Admission Committee
40. Convener, ChemCrown 2010-11, ARSD College, University of Delhi.
41. Member, Canteen committee
42. Member, Dramatics society
43. Member, College Magazine committee
44. Co-convener, Chemical Society ChemCrown, ARSD College, University of Delhi (2009-10).
45. Member: ECA Committee, Placement and Summer Training & Magazine Committee; Bhaskaracharya College of Applied Sciences (2006-07)
46. Recognized Ph. D supervisor by Department of Chemistry, University of Delhi.
47. Associate Coordinator for conducting online examination, Environmental studies, Institute of Life Long Learning (ILLL), University of Delhi (2010).
48. Resource Person for Delhi University faculty development. Conducted ILLL-Workshop Tier II, ICT Workshop for Capacity Building of Delhi University Faculty, ARSD College (2009-2010).
49. One day seminar on Third Year Chemistry Course of the Restructured B. Sc. Programme, Department of Chemistry, University of Delhi (27 October 2007).
50. Meeting for finalizing the syllabus of semester system in B. Sc Chemistry (Honors) (2009).

ANY OTHER INFORMATION

DOCTORAL STUDENTS/ PROJECT FELLOWS

1. Mr. Vishnu Kumawat, Pursuing Ph.D. from University of Delhi, 2022 onwards.
2. Dr. Pooja Patanjali, **Awarded in 2022 from University of Delhi**
Preparation, Characterization and Application of Bentonite based Adsorbents for Cationic Dye Removal.
3. Dr. Rashmi Rani Padhy, **Awarded in 2022 from AIAS, Amity University**
Synthesis and Characterization of Novel Functional Zeolitic Materials Based on Industrial and Agro Wastes.

4. Ms. Little Nagyal, **Awarded in 2023** from **University of Delhi**.
Synthesis, Characterization and Application of Pillared Clay Adsorbents for the Removal of Dyes from Contaminated Wastewater.
5. Mr. Kartik Jain, Ph. D. student registered at University of Delhi (2021 onwards).
6. Mr. Neeraj Kumar Mishra, UGC Project Fellow (2013-2016)

INTERNATIONAL STUDENTS

- Dr. Amit Kumar, Guest Researcher, JAIST **Ph. D. fellow, Japan**; “*Synthesis of 4, 4 diaminostilbene from 4-aminocinnamic acid*” (Ph. D. Minor Project, 2014-15)

UNDERGRADUATE STUDENTS

(STAR Innovation Project (2016-19))

- 1 Rishipal Sharma
- 2 Shivangi Singh Chauhan
- 3 Sachchidanand Soham Gupta
- 4 Ramesh Kumar
- 5 Ishani Rathore
- 6 Eti
- 7 Preeti Kang
- 8 Divyansh Dhiman
- 9 Sourav Gulia
- 10 Rohit Yadav

(Innovation Project 2015-16)

- 11 Akash Gupta
- 12 Rajat Nagpal
- 13 Vikash Kumar
- 14 Sonal Bansal
- 15 Garhima Arora
- 16 Teena
- 17 Aseema Bahlwal
- 18 Chitresh
- 19 Ritu Dhara
- 20 Shikha Rai
- 21 Varun Aggarwal, “*Synthesis and Characterization of Polymeric Ionic Tribenzyltin (IV) ester of succinic acid*” (2007).

POSTGRADUATE STUDENTS

1. Surbhi Agrawal (2019-Pursuing), New Approach In Medicinal Organometallic Chemistry
2. Garv Nandwani (2024-Pursuing) New Approach In Medicinal Organometallic Chemistry
3. Shreya Saha (2024-Pursuing)
4. Vaibhav Kumar Mishra (2024-Pursuing)

5. Sunidhi Arora (2019-2024)
6. V P Rosh (2019-2024)
7. Aseema Bahlwal, (IIT-Roorkee) Postgraduate Intern (Dec 2016-January 2017)
8. Komal Sachan, (Amity University) Postgraduate Intern (Dec 2016-January 2017)
9. Ms. Monica Bhatt, Postgraduate intern (2015-16)
10. Ms. Neetu Yadav, Post graduate Internship (2013)

5	Kritika Joshi	Synthesis of acid and thermally activated bentonite for heavy metal removal	May-June 2018	Department of Applied Chemistry, Amity University, Noida
6	Kopal Shandilya	Synthesis of acid and thermally activated kaolinite for dye removal.	May-June 2018	Department of Applied Chemistry, Amity University, Noida
7	Shreya	Role of macrocyclic ligands in water purification	May-June 2018	Department of Applied Chemistry, Amity University, Noida
8	Manisha	Chemistry of macrocyclic ligands	May-June 2018	Department of Applied Chemistry, Amity University, Noida
9	Komal Sachan	Trimetallic nanocomposites of transition metals Titanium and Vanadium by Sol techniques: Synthesis, Characterisation and Electronic properties.	June-July 2017	Department of Applied Chemistry, Amity University, Noida
10	Manav Dhingra	Biosynthesis of nanoparticles and core shell nanoparticles	June-July 2017	Department of Chemistry University of Delhi
11	Anuj Thukral	Sonication assisted synthesis of Chitosan mixed nanocomposite of $\text{TiO}_2 - \text{Al}_2\text{O}_3$ and its characterization.	Jan-June 2017	Department of Applied Chemistry, Amity University, Gurugram
12	Payal Mehendiratta	Preparation of diosgenin noncolloid and its characterization	Jan-June 2017	Department of Applied Chemistry Amity University
13	Payal Mehendiratta	Encapsulation of coumarin molecule and profiling of its release mechanism.	May-July 2016	Department of Applied Chemistry Amity University
14	Megha Jain	Application of sol-gel techniques for the synthesis of Titanium based mixed oxides hybrid using ammonia.	May-June 2015	Department of Applied Chemistry Amity University
15	Priyanka	Synthesis of metal Nanocomposites and its characterization through sol-gel route.	May-June 2016	Department of Applied Chemistry Amity University
16	Nishtha Yadav	Synthesis and characterization of alumina from chemically modified molecular precursor through sol-gel route.	Jan-June 2016	Department of Applied Chemistry Amity University

17	Gaurav Bahuguna	Synthesis characterization of TiO_2 Nanoparticles from chemically modified molecular precursor through sol-gel route.	Jan-June 2016	Department of Applied Chemistry Amity University
18	Nishtha Yadav	Application of sol-gel technique for synthesis of Vanadium based mixed metal oxides hybrid using Ammonia.	May-June 2015	Department of Applied Chemistry Amity University
19	Gaurav Bahuguna	Synthesis of silver nanoparticles using plant extract.	May-June 2015	Department of Applied Chemistry Amity University