Curriculum vitae

Dr. Neeraj Gupta

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Personal Details

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Citizenship Indian

Professional Qualifications

Master Degree (M.Sc.) in Chemistry from Himachal Pradesh University, India in the year 2000.
Ph. D. Chemistry from Panjab University Chandigarh, India in the year 2008.
Postdoc from University of Kentucky (United States of America) in the year 2012.
Postdoc from Institute of Metal Research, Shenyang National Laboratory (China) in the year 2016.

Courses Taught

CCS-517: Commercial and Green Synthesis
CCS-522: Reaction Mechanism, Stereochemistry and Reagents
CCS-524: Bio-Organic Chemistry
CCS-624: Academic Writing
CCS-705: Research Methodology
CCS-565: Research Project
CHM-540: Natural Products
CHM-533: Organic Spectroscopy
FSU-038: Writing Skills and Seminar
NET Coaching Sessions
Remedial and Mentorship Classes (every semester)

Completed an online course *"Spectroscopy for Organic Compounds"* (2013–14) under the e-Univ program of Shoolini University. Prepared material for 45 lectures, including video recordings and awarded the *Best State-Level Course* by the university.

Employment History (Current and Past)

- **Assistant Professor**
  Central University of Himachal Pradesh, Kangra (HP), India
  Jan 2020 – Present
- **Associate Professor and Head**
  Shoolini University, Bajhol, Solan (HP), India *(Private Organization)*
  Oct 2017 – Jan 2020
- **Assistant Professor**
  Shoolini University, Bajhol, Solan (HP), India
  Nov 2012 – Oct 2017
- **Chinese Academy of Sciences Postdoctoral Fellow** *(on Academic Leave from Shoolini University)*
  Chinese Academy of Sciences, Shenyang National Laboratory (SYNL), China
  May 2014 – Nov 2016

- **Fulbright Postdoctoral Research Scholar**
  Department of Chemistry, University of Kentucky, Lexington (KY), USA
  Sept 2011 – Aug 2012
- **Research Scientist**
  Jubilant Life Sciences R&D Center, Noida (UP), India – *USFDA Approved*
  Aug 2009 – July 2011
- **Research Officer**
  Ind-Swift Labs Ltd. R&D Center, Mohali (Punjab), India – *USFDA Approved*
  Oct 2007 – July

Personal Distinctions

- Fulbright Nehru Postdoctoral Research Fellowship (2011-12) Awarded by United States India Educational Foundation.
- Postdoctoral Fellowship Award by Chinese Academy of Sciences (May 2014- Nov 2016) China for doing research in IMR-Shenyang National laboratory (Shenyang) China.
- Young Scientist Award by Department of Science and Technology (India) in 2014.
- Fellowship by C. S. I. R (Council of Scientific and Industrial Research)-New Delhi during the research period and qualified National Eligibility Test (N.E.T) in Chemistry twice in June and December 2001 respectively. [C.S.I.R (N.E.T) is the national level exam conducted all over the country for admissions into graduate programs]
- Qualified State Level Eligibility Test **(S. L. E. T)** in chemistry in the year 2001.

Research Funding and Grants

1. Team member of a ₹10 Crore grant awarded to the School of Physical Sciences, Department of Physics, Central University of Himachal Pradesh under the PAIR scheme by ANRF (2025).
2. Near Infrared (NIR) emitting biomolecule conjugated nanomaterials as a nanoprobe for microplastic detection awarded by Department of Biotechnology (Government of India) for ₹14 Lakh in the year 2025 (Duration two years).
3. Deriving methyl furans from Himalayan Biomass as sustainable alternative to petroleum products, Project awarded for for ₹0.6 million in the year 2019 by HIMCOSTE, Himachal Pradesh, India (Duration two years)
4. Development of Efficient Non-toxic Catalysts for Glucose Conversion to 5-Hydroxymethyl furfural (5-HMF) and related molecules in ionic liquid (by USIEF-New Delhi and Fulbright Commission USA, year 2011).
5. Development of environmental benign technologies for the conversion of cellulose into value added chemicals (By DST-New Delhi, Year 2013).
6. Developing the carbon based catalyst for catalytic conversion of lignocellulosic biomass by Chinese Academy of Sciences in the year 2014.

Invited Seminars and Invited Conference Presentations

Delivered Talks at International Events:

- Most Important Symposium in Carbon for Catalysis*, Florence, Italy (2024)*
- CESEP 2015*, Poznan University of Technology, Poland (2015)*
- University of Kentucky, USA – Developing Green Technology for the Synthesis of Value-Added Chemicals and Bioactive Compounds *(2012)*

Attended Major International Events:

- Third Symposium of Carbon Catalysis, China (2015)
- Frontiers in Nanochemistry, Beijing University, China (2015)
- 5th Trilateral Conference on Advances in Nanoscience, China (2014)
- 16th ACS Green Chemistry Conference, USA (2012)

National Conferences (India):

- Delivered lectures at multiple universities and colleges on topics related to carbon materials, sustainable chemistry, water purification, and catalysis.
- Example lecture themes include:
  - "Metal-Free Carbon Materials for a Sustainable Future"

- "Recent Trends in Science and Technology for Environment Conservation and Sustainable Development"

Publications

Total 86 articles have been published till date with additional 5 patents, 1 book chapter and 2 conference proceedings. **Five publications have been featured on the cover page of prestigious journals** (RSC, Wiley and Elsevier). One patent on anticancer drug temozolomide has been commercialized.

Cover Features

Details of publications (author contributions are mentioned in the respective manuscript)

Refereed Journal Articles (Fifteen best given in beginning)

1. Theoretical and Experimental Investigations on Interaction of Epinephrine with Melamine-Modified Carbon Nanotubes, Vishal Bharati Jaryal, Diksha Pandey, Sivaranjana Reddy Vennapusa, Ritika Sharma, Dilbag Singh and **Neeraj Gupta*, *New J. Chem. (RSC)*, 2025**, 49, 5677-5693 (ISSN 1144-0546 and Impact Factor 3.5). **This article is selected for front cover highlight by this journal.**
2. Direct Styrene Hydrogenation on a Metal-Free Boron-Nitrogen Doped Carbon Catalyst, **Neeraj Gupta***, Abhishek Soni, Sahil Kumar, Mamta Shandilya, Elisabetta Inico, Ilaria Barlocco, Giovanni Di Liberto, Alberto Villa, ***Material Chemistry Frontiers (RSC)*, 2025**, DOI: 10.1039/d4qm01107d. (ISSN: 2052-1537; Impact Factor 6.0).
3. Nanoarchitectonics of Palladium Nanoparticles Supported on Carbon-based Heterogeneous Catalysts for C-H Activation Reaction, Sahil, **Neeraj Gupta***, ***ChemCatChem (Wiley)*, 2025**, e202401840. (ISSN: 1867-3880; Impact Factor 5.6).
4. Identifying Superior Binding Sites for Lead Detection on Solvothermally Engineered Fluorescent Active Heteroatom-Doped Carbon Nanofibers**,** Mohit Kumar, Sahil, Abhishek Soni, **Neeraj Gupta***, ***ChemNanoMat (Wiley)*, 2025**, e202500064 (ISSN: 2199-692X; Impact Factor: ~3.8) **(ISSN: 2199-692X; Impact Factor: 3.8).**
5. Heterogenization of Ionic Liquid on Multiwalled Carbon Nanotubes for Lead (II) Ion Detection A. Soni, D. Singh, ***Neeraj Gupta*, ChemPlusChem* (Wiley), 2024**, e202400284. **(ISSN: 2192-6506; Impact Factor: 3.2).**
6. Metal free carbon-based nanomaterials: Insights from synthesis to applications in sustainable catalysis, Vishal Barti Jaryal, Alberto Villa**, Neeraj Gupta*, *ACS Sustainable Chemistry and Engineering (ACS)*, 2023,** 11, 14841**. (ISSN: 2168-0485, Impact Factor 9.2)**. **This article (Account) is selected for front cover highlight by this journal.**
7. Structural designs of functional metal organic frameworks for the detection of mercury in contaminated water sources**,** Abhishek Soni, Ritika Sharma, Dharmender Singh Rana, Dilbag Singh, **Neeraj Gupta***, ***Coordination Chemistry Reviews (Elsevier)*, 2023, 494,** 215343, **(ISSN: 1873-3840, Impact Factor 24.8)**.
8. Immobilised Molecules' Impact on the Efficacy of Nanocarbon Organic Sensors for Ultralow Dopamine Detection in Biofluids, Jagadeesh Suriyaprakash, **Neeraj Gupta,** Shan Lianwei, Wu Lijun, ***Advanced Materials Technologies (Wiley),* 2022**, 7(9), 2200099.**(ISSN: 2365-709X, Impact Factor 8.8). This article is selected for cover feature article by Advanced Materials Technologies Journal (Wiley).**
9. Engineering of all solution/substrate processable biosensors for the detection of epinephrine as low as pM with rapid readout, Jagadeesh Suriyaprakash, **Neeraj Gupta,** Lijun Wu**,** Lianwei Shan, ***Chemical Engineering Journal*** *(Elsevier)*, 2022, 436, 135254. (ISSN: 1385-8947, Impact Factor 16.7). **This article is selected for cover feature article by Chemical Engineering Journal.**
10. Development of metal free melamine modified graphene oxide for electrochemical sensing of epinephrine**,** Kshipra Sen, Sajjad Ali, Dilbag Singh, Kulvinder Singh, **Neeraj Gupta*, *FlatChem (Elsevier)*, 2021**, **30**, 100288 **(ISSN: 2452-2627, Impact Factor 5.8)**.
11. Molecularly engineered carbon based sensor for the ultrafast and specific detection of neurotransmitters, Jagadeesh

Suriyaprakash, Kanchan Bala, Lianwei Shan, Lijun Wu and **Neeraj Gupta***, ***ACS Appl. Mater. Interfaces (American Chemical Society)*, 2021,** 13 (51), 60878-60893.**(ISSN: 1944-8244, Impact Factor 10.4)**.

12. Metal free alkene hydrogenation by B-doped graphitic carbon nitride, Ashima Dogra, Ilaria Barlocco, Amritpal Singh, Ferenc Somodi, Alberto Villa and **Neeraj Gupta***, ***Catal. Sci. Tech* (RSC) 2020**, 10, 3024-3028 **(ISSN 2044-4761, Impact Factor 6.1).**
13. Carbocatalysing the preparation of N-rich heterocyclic compounds, N**eeraj Gupta**, Oleksiy Khavryuchenko, Guodong Wen, Kuang-Hsu Wu, Fuwei Li, Dangsheng Su, ***Carbon (Elsevier)*, 2018,** 130, 714-723 **(ISSN: 0008-6223; Impact Factor 11.3).**
14. Metal-Free Oxidation of Glycerol over Nitrogen-Containing Carbon Nanotubes. **Neeraj Gupta**, Oleksiy Khavryuchenko, Alberto Villa, Dangsheng Su, ***ChemSusChem (Wiley)***, **2017**, 10, 3030-3034. **(ISSN:1864-564X;Impact Factor 9.1).**
15. Heterogenization of homogenous reaction system on carbon surface with ionic liquid as mediator, Yuxiao Ding, Bingsen Zhang, **Neeraj Gupta** and Dang Sheng Su, ***Green Chem***. (***RSC***), **2015**, **17 (2), 1107 – 1112. (ISSN: 1463-9262; Impact Factor 10.1**

Year 2025

16. Facile One-Pot Synthesis of Fe_3O_4─MoS_2@MXene Nanocomposite as an Electrochemical Sensor for the Detection of Levofloxacin, Sahil, Vishal Bharati Jaryal, Ritika Sharma, Kamal Kishor Thakur, Farid S Ataya, Neeraj Gupta, Dilbag Singh, ***ChemistrySelect (Wiley)***, 2025, e202405959. (ISSN: 2365-6549; Impact Factor: 2.2).
17. Nitrogen and Sulfur Co-doped Lantana Camara Derived Carbon Material for Detection of Hg^{2+} Ions in Contaminated Water, Abhishek Soni, Neeraj Gupta*, ***Water Conservation Science and Engineering*** *(Springer Nature)*, 2025, https://doi.org/10.1007/s41101-025-00337-4. (ISSN 2364-5687 and impact factor 3.0).
18. Exploring regional influences on bioactive components in tea leaves and their effect on sensory quality, Sumit Thakur, Pramod Kumar, Neeraj Gupta*, ***Journal of Food Composition and Analysis***, 2025, 107683 (ISSN: 0889-1575; Impact Factor: ~4.0)
19. Hydrothermal engineering of WS_2/N-rGO heterostructure as an efficient electrochemical sensor for the detection of dopamine, Sachin Kumar, Ritika Sharma, Vishal Bharati Jaryal, Abhishek Awasthi, Kulvinder Singh, Dalia Fouad, Neeraj Gupta*, Dilbag Singh, ***Microchemical Journal***, 2025, 113733 (ISSN: 0026-265X; Impact Factor: 4.9)
20. Fabrication of Carbon-Based Electrochemical Sensor Derived from Waste Coconut Husk for Dopamine Detection in Human Urine, Ritika Sharma, Vishal Bharati Jaryal, Prajvi Sharma, Dharmender Singh Rana, Anvita Sheel, Dalia Fouad, Neeraj Gupta, ***Journal of The Electrochemical Society***, 2025, 172(3), 037524 (ISSN: 0013-4651; Impact Factor: ~3.3)

Year 2024

21. Involvement of C=N Sites in Solvothermally Engineered Metal-Free Carbon Material from Weed *Lantana camara* for the Detection of Mercury Ions: Experimental and DFT Insights, Sahil, A. Soni, J. Suriyaprakash, R. Singh, ***N. Gupta*, Luminescence*** **(Wiley), 2024**, 39 (12), e70036. **(ISSN: 1522-7243; Impact Factor: 3.2).**
22. Harnessing Biomass Derived Carbon Material with Heteroatoms for Sensitive and Selective Detection of Mercury (II) Ions in Waste Water, N. Jaswal, V. B. Jaryal, R. Singh, P. Kumar, ***N. Gupta****, ***Microchemical Journal*** **(Elsevier), 2024**, 207, 111767. **(ISSN: 0026-265X; Impact Factor: 5.8).**
23. Fabrication of Nitrogen Functionalized Carbon Nanofiber Nanocomposite Using Activated Carbon Derived from *Lantana Camara* for the Electrochemical Detection of Ofloxacin, Sahil, V. Bharati Jaryal, D. Singh, ***N. Gupta****, ***ChemistrySelect*** **(Wiley), 2024**, DOI: 10.1002/slct.202403051. **(ISSN: 2365-6549; Impact Factor: 2.2).**
24. Fabrication of a Reversible Fluorescence Sensor Based on Nitrogen-Sulfur Co-Doped Multiwalled Carbon Nanotubes for Detection of Mercury Ions: Experimental and DFT Insights, V. Bharati Jaryal, R. Singh, S. Ali, M. Bououdina, ***N. Gupta*, ChemistrySelect*** **(Wiley), 2024**, DOI: 10.1002/slct.202400699. **(ISSN: 2365-6549; Impact Factor: 2.2).**
25. Thiourea-Modified Multiwalled Carbon Nanotubes as Electrochemical Biosensor for Ultra-Precise Detection of Dopamine, V. B. Jaryal, S. Kumar, D. Singh, ***N. Gupta*, ChemNanoMat*** **(Wiley), 2024**, e202300637. **(ISSN: 2199-692X; Impact Factor: 3.8).**
26. Cyclic carbonates: Treasure of fine chemicals obtained from waste stream CO_2 over carbon-based heterogeneous catalysts, Sahil, **Neeraj Gupta***, ***Renewable and Sustainable Energy Review (Elsevier)***, **2024**, 193, 114297. **(ISSN: 13640321; Impact Factor 16.8).**
27. Heterogenization of Ionic Liquid on Multiwalled Carbon Nanotubes for Lead (II) Ion Detection, Abhishek Soni,

Dilbag Singh, **Neeraj Gupta*, *ChemPlusChem (Wiley)***, **2024**, e202400284 **(ISSN: 2192-6506; Impact Factor 3.4).**

28. Metal-free Carbon Material Derived from Lantana Camara for the Detection and Removal of Ciprofloxacin, Sahil, Vinit Sharma, **Neeraj Gupta*, *Environmental Science and Pollution Research (Springer Nature)***, 2024,45683. (ISSN: 1614-7499; Impact Factor 5.8).
29. Molybdenum disulfide Nanostructure Grown on Multi-Walled Carbon Nanotube for the Electrochemical Detection of Ofloxacin, R Sharma, S Kumar, DS Rana, S Thakur, **N Gupta**, D Singh, ***Journal of Environmental Chemical Engineering (Elsevier)***, **2024,** 112413. **(ISSN: 2213-2929; Impact Factor 7.7).**
30. Parthenium hysterophorus derived nanostructures as an efficient carbocatalyst for the electrochemical sensing of mercury (II) ions, Ritika Sharma, Dharmender Singh Rana, **Neeraj Gupta**, Sourbh Thakur, Kamal Kishore Thakur, Dilbag Singh, ***Chemosphere (Elsevier)***, **2024,** 141591. **(ISSN: 1879-1298; Impact Factor 8.8).**
31. Metal-Free Catalytic Conversion of Veratryl and Benzyl Alcohols through Nitrogen-Enriched Carbon Nanotubes, **Neeraj Gupta**, Ilaria Barlocco, Oleksiy Khavryuchenko, Alberto Villa, ***C Journal of Carbon Research (MDPI),* 2024,** 13 (10), https://doi.org/10.3390/c10010013. **(ISSN: 2311-5629; Impact Factor 4.5).**
32. Nitrogen and sulfur functionalized microporous carbon nanomaterial derived from waste coconut husk for the efficient detection and removal of ofloxacin, Ritika Sharma, Jyoti Thakur, Vishal Bharti Jaryal, Dharmender Singh Rana, Sourbh Thakur, **Neeraj Gupta**, Dilbag Singh, ***Chemosphere (Elsevier)***, **2024**, 346, 140653 **(ISSN: 0045-6535, Impact Factor 8.8)**.
33. Antibacterial and Antioxidant Compounds from the Root Extract of *Aloe debrana,* Tokuma Getahun, Joydeep Das, Parames C Sil, **Neeraj Gupta*, *Evidence-Based Complementary and Alternative Medicine (Hindwai),* 2024** (1), 6651648. **(ISSN: 1741-4288, Impact Factor 2.0)**.

Year 2023

34. Development of metal free carbon catalyst derived from Parthenium hysterophorus for the electrochemical detection of dopamine, Dharmender Singh Rana, Ritika Sharma, **Neeraj Gupta**, Vinit Sharma, Sourbh Thakur, Dilbag Singh, ***Environmental Research (Elsevier),* 2023, (231).** 116151 **(ISSN 1096-0953 and Impact Factor 8.3).**
35. Nitrogen-Doped Fluorescent Active Fullerenes as a Fluorescent Probe for the Detection of Hg2+ ions in an Aqueous Solution, Sahil, Suresh Kumar, Yash B. Barot, Roli Mishra, Dilbag Singh, **Neeraj Gupta***, ***Environmental Nanotechnology, Monitoring & Management (Elsevier)*, 2023** (20), 100845 **(ISSN 2215-1532 and Impact factor** 5.9).
36. Electrochemical detection of dopamine by using nickel supported carbon nanofibers modified screen printed electrode, Vinit Sharma, Pardeep Singh, Anil Kumar, **Neeraj Gupta***, ***Diamond and Related Materials (Elsevier)*, 2023** (133) 109677 **(ISSN 0925-9635 and Impact Factor 4.1).**
37. An overview on $InVO_4$-based photocatalysts: Electronic properties, synthesis, enhancement strategies, and photocatalytic applications, Priya Dhull, Anita Sudhaik, Vinit Sharma, Pankaj Raizada, Vasudha Hasija, **Neeraj Gupta**, Tansir Ahamad, Van-Huy Nguyen, Aejung Kim, Mohammadreza Shokouhimehr, Soo Young Kim, Quyet Van Le, Pardeep Singh, ***Molecular Catalysis (Elsevier)*, 2023** (539), 113013 **(ISSN 2468-8231 and Impact Factor 4.6).**
38. Molybdenum disulfide (MoS_2) and reduced graphene oxide (rGO) nanocomposite based electrochemical sensor for detecting mercury(II) ions, Dharmender Singh Rana, Ritika Sharma, Sachin Kumar, **Neeraj Gupta**, Sourbh Thakur, Kmamal Kishore Thakur, Dilbag Singh, ***Nano-Structures & Nano-Objects (Elsevier)***, **2023**, 36, 101041. **(ISSN 2352-507X and Cite Score 11.9).**
39. Tea waste–derived charcoal as an efficient adsorbent for the removal of rhodamine B, Kanchan Bala, Deepika Sharma, Naveen Kumar, **Neeraj Gupta**, Vaseem Raja, ***Biomass Conversion and Biorefinery (Springer)***, **2023**, https://doi.org/10.1007/s13399-023-04823-4. **(ISSN 2190-6815 and Impact Factor 4.1).**
40. Nitrogen- and Sulfur-Rich Activated Carbon Derived from Biomass Waste as Adsorption Probe for Pb^{2+} Ions, Susheel, Sahil, Rajeev Kumar, **Neeraj Gupta***, ***Water Conservation Science and Engineering (Springer Nature)***, **2023**, https://doi.org/10.1007/s41101-023-00230. **(ISSN 2364-5687and impact factor 3.0).**

Year 2022

41. Catalytic conversion of corn cob and pinus bark derived lignin into hydrocarbons and phenols using Ru@CNF with

mechanistic details, Vinit Sharma, Anil Kumar, Jagadeesh Suriyaprakash, **Neeraj Gupta***, ***Biomass conversion and Biorefinery (Springer)***, **2022,** https://doi.org/10.1007/s13399-022-03417-w **(ISSN 2190-6815 and Impact Factor 4.1).**

42. Janus 2D-carbon nanocomposite-based ascorbic acid sensing device: Experimental and theoretical approaches, Jagadeesh Suriyaprakash, Lianwei Shan, Neeraj Gupta, Hao Wang, Lijun Wu, ***Composites Part B: Engineering (Elsevier)*, 2022, 245**, 110233 **(ISSN 1359-8368 and Impact Factor 11.3).**
43. Graphitic Sulphur Functionalized Carbon Sheets as an Efficient "Turn-Off" Absorption Probe for the Optical Sensing of Mercury Ions in Aqueous Solutions, Vishal Bharti Jaryal, Dilbag Singh, **Neeraj Gupta***, ***New J. Chem. (RSC)*, 2022, 46**, 5712–5718 **(ISSN 1144-0546 and Impact Factor 3.5).**
44. Increasing the efficiency of reduced grapheme oxide obtained via high temperature electrospun calcination process for the electrochemical detection of dopamine, **Neeraj Gupta**, Anit Kaur, Gun, Vinit Sharma, Rupak Nagraik, Mamta Shandilya, ***J. Electroanal. Chem. (Elsevier)***, **2022, 904,** 115904 **(ISSN 1572-6657 and Impact Factor 4.4).**

Year 2021

45. pH controlled efficient conversion of extracted hemicellulose from agricultural waste to furfural using choline based BADES and NADES as homogenous acid catalysts, Shalini Arora, **Neeraj Gupta**, Vasundhara Singh, ***ChemSusChem (Wiley)*, 2021, 14 (18) 3953-3958 (ISSN:1864-564X; Impact Factor 9.1).**
46. Structural and optical amendment of PVDF into CQDs through high temperature calcination process, Gun Anit Kaur, Vinit Sharma, **Neeraj Gupta**, Mamta Shandilya, Radheshyam Rai. ***Material Letters (Elsevier)* 2021**, 304, 130616 **(ISSN 0167-557X and Impact Factor 3.4).**
47. Brønsted Acid Functionalized Carbon Catalyst for Synthesis of Biologically Active Coumarin-substituted Bis(indolyl)methanes, Vikrant Singh, Ashima Dogra, Joydeep Das, Prasenjit Manna, **Neeraj Gupta***, ***FlatChem (Elsevier)***, **2021**, 29, 100279 **(ISSN: 2452-2627, Impact Factor 5.8)**.
48. Pd-Au supported reduced graphene oxide catalyst for carbon hydrogen bond activation in benzene, Deepika Sharma, Kamal Kishore, **Neeraj Gupta*, *ChemistrySelect (Wiley),* 2021**, 6, 7111-7117, **(ISSN 2365-6549 and Impact** Factor 2.3).
49. Metal free g-C_3N_4/graphite composite based carbocatalyst for epoxidation of styrene, Ashima Dogra, Anil Kumar, Mohit Kapoor, **Neeraj Gupta***, ***ChemistrySelect (Wiley),* 2021**, 6, 7118-7122, **(ISSN 2365-6549 and Impact Factor 2.3**).

Year 2020

50. Carbon based catalysts for the hydrodeoxygenation of lignin and related molecules: A powerful tool for the generation of non-petroleum chemical products including hydrocarbons, Vinit Sharma, Tokuma Getahun, Minal Verma, Alberto Villa, **Neeraj Gupta***, ***Renewable and Sustainable Energy Reviews (Elsevier),* 2020**, 133, 110280. **(ISSN: 13640321; Impact Factor 16.8).**
51. Versatile carbon supported mono and bimetallic nanocomposites: synthesis, characterization and their potential application for furfural reduction, Deepika Sharma, Jagadeesh Suriyaprakash, Ashima Dogra, Shahram Alijani, Alberto Villa, **Neeraj Gupta*, *Materials Today Chemistry (Elsevier), 2020,** *17, 100319* **(ISSN 2468-5194 and impact factor 8.3).**
52. Improved Pd/Ru metal supported graphene oxide nano-catalyst for hydrodeoxygenation of vanillyl alcohol, vanillin and lignin, Shalini Arora, **Neeraj Gupta**, Vasundhara Singh, ***Green Chemistry (RSC)***, **2020**, 22, 2018-2027 **(ISSN: 1463-9262; Impact Factor 10.2).**
53. Recent developments in heterogeneous catalytic routes for the sustainable production of succinic acid from biomass resources, Minal Verma, Parteek Mandyal, Dilbag Singh and **Neeraj Gupta***, ***ChemSusChem (Wiley)*, 2020,** 13, 4026-4034**. (ISSN:1864-564X; Impact Factor 9.1).**
54. Choline based basic ionic liquid (BIL)/ acidic DES mediated cellulose rich fractionation of agricultural waste biomass and valorization to 5-HMF, Shalini Arora, **Neeraj Gupta***, Vasundhara Singh, ***Waste Biomass Valori. (Springer),* 2020**, 11, 3345-3354. **(ISSN 1877-2641 and Impact Factor 3.7).**
55. Metal free alkene hydrogenation by B-doped graphitic carbon nitride, Ashima Dogra, Ilaria Barlocco, Amritpal Singh, Ferenc Somodi, Alberto Villa and **Neeraj Gupta***, ***Catal. Sci. Tech* (RSC) 2020**, 10, 3024-3028 **(ISSN 2044-**

4761, Impact Factor 6.1).

56. Chemical composition, antibacterial and antioxidant activities of essential oils from Laggera tomentosa Sch. Bip. exOliv. etHiern (Asteraceae), Tokuma Getahun, Vinit Sharma, Deepak Kumar, **Neeraj Gupta*, *Turkish Journal of Chemistry*, 2020,** 44 (6), 1539-1548.**(ISSN: 13036130, Impact Factor 1.2)**.
57. Growth mechanism of rGO/CDs by electrospun calcination process: structure and Application, Vinit Sharma, Gun Anit Kaur, **Neeraj Gupta***, Mamta Shandilya, ***Flat Chem (Elsevier),* 2020**, 24, 100195. **(ISSN: 2452-2627, Impact Factor 5.8)**.
58. Synthesis of biphenyl through the C-H bond activation in benzene over a Pd catalyst supported on graphene oxide, Deepika Sharma, Lyubov G. Bulusheva, Dmitri A. Bulushev and **Neeraj Gupta***, ***New J. Chem. (RSC)*, 2020,** 44, 12178-12184 **(ISSN 1144-0546 and Impact Factor 3.5).**
59. Chemical composition, antibacterial and antioxidant activities of oils obtained by different extraction methods from Lepidium sativum L. seeds, Tokuma Getahun, Vinit Sharma, **Neeraj Gupta*, *Industrial Crops and Products (Elsevier)***, **2020**, 156, 112876. **(ISSN 0926-6690 and impact factor 6.4).**
60. Chemical composition and biological activity of essential oils from Aloe debrana roots, Tokuma Getahun, Vinit Sharma, Neeraj Gupta*, ***Journal of Essential Oil Bearing Plants*** (Taylor and francis), **2020**, **23,** 493-502 **(ISSN 0972060X and Impact Factor 1.6).**
61. DL-Valine assisted fabrication of quercetin loaded CuO nanoleaves through microwave irradiation method: Augmentation in its catalytic and antimicrobial efficiencies, Kumari Mansi, Raj Kumar, Jaspreet Kaur, S.K. Mehta, Satish Kumar Pandey, Deepak Kumar, Ashutosh K. Dash, **Neeraj Gupta*, *Environ. Nanotech. Monitoring & Management (Elsevier)*, 2020**, 14, 100306. **(ISSN 2215-1532 and Impact factor 5.9).**
62. Derivatized Carbon Nanotubes for Gene Therapy in Mammalian and Plant Cells, Adhish Singh, Dr. Ming Hua Hsu, **Dr. Neeraj Gupta**, Dr. Partha Khanra, Dr. Pankaj Kumar, Dr. Ved Prakash Verma, Dr. Mohit Kapoor, ***ChemPlusChem (Wiley)***, **2020,** 85, 466-475 **(ISSN 2192-6506 and Impact Factor 3.2).**
63. Carbon nanotube based materials for electrochemical sensing of neurotransmitter dopamine, Kanchan Bala, Deepika Sharma, **Neeraj Gupta***, ***ChemElectroChem (Wiley)*, 2019,** 6, 274-288 **(ISSN: 2196-0216; Impact Factor 4.7). This article is selected for cover feature by ChemElectroChem (Wiley) Journal.**

Year 2019

64. Aluminum-Based Catalysts for Cycloaddition Reactions: Moving One Step Ahead in Sustainability, Ashima Dogra, **Neeraj Gupta***, ***ChemistrySelect (Wiley)***, **2019**, 10452– 10465. **(ISSN 2365-6549 and Impact Factor 2.3).**
65. Valorisation of Biomass Derived Furfural and Levulinic Acid by Highly Efficient Pd@ND Catalyst, Neeraj Gupta, Nikolaos Dimitratos, Dangsheng Su, Alberto Villa, ***Energy Technology (Wiley)*, 2019**, 7 (2), 269-276. (ISSN 4288-2194 Impact Factor 4.1).
66. The genus Laggera (Asteraceae) – Ethnobotanical and Ethnopharmacological Information, Chemical Composition of its Essential Oils and their Biological Activities: A Review, Tokuma Getahun, Vinit Sharma, **Neeraj Gupta***,***Chem. Biodiv.* (Wiley), 2019,** 16 (8), e1900131. **(ISSN** 16121872 and **Impact Factor 2.7).**
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Year 2018

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81. Efficient Role of Ionic Liquid (bmim)HSO_4 as Novel Catalyst for Monotetrahydropyranylation of Diols and Tetrahydropyranylation of Alcohols. Jasvinder Singh, **Neeraj Gupta**, G. L. Kad, Jasamrit Kaur, ***Synth. Commun*.** **(Taylor & Francis**), **2006**, 36, 2893-2900.**(*ISSN*: 0039-7911 and Impact Factor 1.9).**

Book Chapter

82. Carbon Nanocomposites; Good Candidates for Sensing and Detection of Neurotransmitters
N. Gupta*, V. B. Jaryal, Sahil, A. Soni, *Nanomanufacturing Techniques in Sustainable Healthcare Applications* (Springer)**, 2024, 57. (ISBN: 978-0-443-15893-2).**
83. Nanodiamonds for Catalytic Reactions, Chapter-18, In Book "Nanodiamonds: Advanced Material Analysis, Properties and Applications", **Neeraj Gupta**, Qi Wang, Guodong Wen, Dangsheng Su, **(Elsevier), 2017**, 439-463. (**ISBN:** 9780323430326)
84. Molecular dynamic simulations and computational modeling of hexagonal boron nitride, in Book Hexagonal Boron Nitride, Sajjad Ali, Sami Ullah, Pir Muhammad Ismail, Muhammad Zahoor, Sharafat Ali, Gulam Yasin, **Neeraj Gupta**, Ejaz Ahmed, Anuj Kumar, Chao Zeng, Tommaso Del Rosso, Mohamed Bououdina, **(Elsevier), 2024**, 589-610. (**ISBN: 978-0-443-18843-5)**

Work Published in Conference Proceedings

85. Electrochemical Sensing of Dopamine using Graphene Oxide Derived from Pine Needle Bio-waste, **Neeraj Gupta***, Kshipra Sen, Vikrant Singh, Abhishek Soni, Mohit Kapoor, *AIP Conference Proceedings*, 2020.
86. Catalytic conversion of saccharides into 5-hydroxymethylfurfural using aluminum Lewis acid catalysts. Folami T. Ladipo, **Neeraj Gupta**, *Daudi* Saangonyo, *Barbara Knutson, Stephen Rankin, Brianna Smith,* 2013, September. In *ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY* (Vol. 246). 1155 16TH ST,

NW, WASHINGTON, DC 20036 USA: AMER CHEMICAL SOC.

Patents

Patent Granted or Commercialized:

87. Improved Process for Preparing Temozolomide, S. B. Bhirud, G. S. Sarin, **Neeraj Gupta**, Parveen Kumar, C. V. Srinivasan, L. Wadhwa, **2010**, (**US Patent**) Pub. No.: WO/2010/140168, International Application No. PCT/IN2010/000365.
88. Energy Efficient Process for Extraction of Cellulose from Pine Needle Bio-Waste, **Neeraj Gupta*, Indian Patent Filed** on 23/05/2018, Patent Filing Number 201811019305.
89. Rapid Process for the synthesis of 5-hydroxymethyl Furfural, **Neeraj Gupta*, Indian Patent Filed on** 16/06/2018, Patent Filing Number 201811022583.
90. Novel Heterogeneous Catalysts for Conversion of Carbohydrates to 5-Hydroxymethylfurfural and Method Thereof, **Neeraj Gupta***, Poorva Devi, Sadhna Sharma, Kanchan Kumari, **Indian Patent Filed on** 08/12/2018, Patent Filing Number 201811046503.

Patent Filed

91. A Process for Ionic Liquid Assisted Chemical Fixation of Carbon Dioxide, Abhishek Soni, **Neeraj Gupta*, Indian Patent Filed** on 07/01/2020, Application Number 202011000732.

Video and Online Material:

92. Completed one online course 'Spectroscopy for Organic compounds' in the year 2013-14 for the e-Univ program of the university that includes preparation of material for 45 lectures including video recording. **The course was awarded as best state level course by the university and a cash prize**

Research (Doctoral Thesis) Supervision

Seven students have been awarded Ph.D. degree under my supervision. Details of all the students with their Ph.D. title and online link for one representative thesis is provided below.

- **Vinit Sharma (1834701003)** has defended his thesis and has been awarded degree in the year 2023 (Title of thesis: Preparation of carbon-based catalysts for biomass conversion and electrochemical sensing of biomolecules).
- **Ashima Dogra (1734701008),** has successfully defended her thesis and has been awarded degree in the year 2021 (Title of thesis: Metal free carbon based catalysts for hydrogen activation and biomass valorization).
  Online thesis link: http://14.139.116.20:8080/jspui/handle/10603/336558
- **Deepika Sharma (1734701002),** has successfully defended her thesis and has been awarded degree in the year 2021 (Title of thesis: Carbon based catalysts for the activation of un-reactive carbon-hydrogen bond and biomass conversion).
- **Tokuma Getahun (1834701013),** has successfully defended his thesis and has been awarded degree in the year 2021 (Title of thesis: Chemical compounds and essential oils from *Lepidium sativum*, *Aloe debrana* and *Laggera tomentosa* and their antioxidant as well as antibacterial activities).
- **Kshipra Sen (1734701006),** has successfully defended her thesis and has been awarded degree in the year 2021 (Title of thesis: Functionalized biomaterials for environmental and biological applications). Jointly supervised with Dr. Kalpana Chauhan, Central University of Haryana.
- **Shalini Arora (16301001),** has defended her thesis on 3rd September 2021 and has been awarded degree (Title of thesis: New catalytic methodologies for isolation of lignocellulosic components from agricultural waste biomass and their valorization). Jointly supervised with Prof. Vasundhara Singh, PEC University of Technology Chandigarh.
- **Pushpa Bhardwaj (12CHD05)**, has successfully defended her thesis and has been awarded degree in the year 2017 (Title of Thesis: Studies towards the Synthesis of Indole and Imidazole Derivatives using Environmental Benign Methodologies).

- **Currently supervising four Ph.D students.**

Career Development Programs

- One month career development program organized by Himachal Pradesh University, HP (India) was attended from 18-Nov-2020 to 17-Dec-2020.
- Two weeks refresher course for the faculty on the topic "Advanced Research Methodology" organized by Ramanujan College, University of Delhi (India) was attended from 20th August 2021 to 3rd Sept 2021.

Other Academic Merits

1. I am a reviewer in American Chemical Society, Wiley and Springer Nature. I have reviewed manuscripts in prestigious journals such as "ACS Catalysis", "Biomass Conversion and Bio-refinery" and "ChemElectroChem". The details are available on the ORCID.
2. I am responsible for "Training and Placement" of our students in Central University of Himachal Pradesh.
3. I am "Academic Co-ordinatorin the department of Chemistry and Chemical Sciences - Central University of Himachal Pradesh.
4. I am also responsible for monitoring "Memorandum of Understanding" with nearby institutes for ensuring the outreach activity of our department.
5. I am peer reviewer for funding projects submitted to "University Grant Commission - New Delhi" (I have reviewed one project till date).
6. I have organized a workshop on Understanding and practice of HPLC and GC for Chemical Analysis from **April 29th to May 4th 2019, in Shoolini University Solan (India).**
7. I was invited as resource person for aspiring future applicants for "Fulbright Fellowship" by USIEF-New Delhi.

Professional Contributions

- Life Member of Fulbright Alumni Association, Department of States, United States of America.
- Life Member of Him Science Congress Association (HP) India

Administration (Previous Experience)

- Head, School of Chemistry, Shoolini University, Solan (HP) from October 2017 – January 2020.