

Dr. Vivek Mishra

Amity Institute of Click-Chemistry Research and Studies (AICCRS)

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Institute page: www.amity.edu/aiccrs



EDUCATION

- ✚ **Ph.D.** in Organic Chemistry: **2012**, at Department of Chemistry, [Banaras Hindu University, Varanasi, UP](#),
Thesis Title: “*Synthesis of Functional Polymers through Living Radical Polymerization*”.
Advisor: Prof. Rajesh Kumar
- ✚ **M.Sc.** in Organic Chemistry: **2004**, at Tilak Dhari Singh (PG) Mahavidhyalaya, affiliated to [Veer Bahadur Singh Purvanchal University, Jaunpur, UP](#).

RESEARCH & TEACHING EXPERIENCE:

- ✚ **Assistant Professor-III (Jan 2020-present)** at [Amity Institute of Click Chemistry Research and Studies \(AICCRS\), Amity University, NOIDA, UP](#)
- ✚ **Guest Faculty (July 2018-December 2019)**, at [University of Delhi, Delhi](#)
- ✚ **SERB National Post-Doctoral Fellow** position (July **2017**-July **2019**) at [University of Delhi, Delhi](#), **Advisor: Prof. R. K. Sharma** (*Synthesis and Characterization of “Green” Controlled radical polymers and its modification via Click Chemistry and their biological application*).
- ✚ **Lecturer (Adhoc) Chemistry** position (Nov **2014**-July **2017**) at [Urmila Devi \(PG\) College, Baraut, UP](#) affiliated to [CJSM Kanpur University, Kanpur, UP](#).
- ✚ **Post-doctoral Fellow (Specialist)** position (May **2013**-May **2014**) at Green Process & Material R & D Laboratory, [Korea Institute of Industrial Technology, South Korea](#), **Advisor: Prof. Yong Jin Kim**
- ✚ **Post-doctoral Fellow (Brain Korea-21)** (May **2012**-April **2013**) Functional Material Research Laboratory, [University of Ulsan, South Korea](#), **Advisor: Prof. Hyung-il Lee** (Development of nanogels for time-dependent drug release)
- ✚ **Project Assistant** (March **2005**-April **2006**) at Hydro Processing Laboratory, [Indian Institute of Petroleum \(CSIR Laboratory\), Dehradun, Uttarakhand](#) **Advisor: Dr. G. Murlidhar**

ADMINISTRATIVE ASSIGNMENTS:

- ✚ UGC Research Project Evaluation Member (2023)
- ✚ Faculty Development Programme (FDP) Coordinator (August 2020)
- ✚ Examination Centre Superintendent and Proctor; Amity University, Noida (December 2020)
- ✚ Entrepreneurship Cell (E-Cell) Coordinator from AICCRS, Amity University, Noida
- ✚ Chief Course Coordinator of master's degree in molecular chemistry (2020)
- ✚ Time-table Coordinator for Ph.D. and M.Sc. in AICCRS
- ✚ Ph.D. Research Coordinator in Molecular Science and Engineering (2020)
- ✚ Program Leader (PL) of master's degree in molecular chemistry (2020)
- ✚ Program Review, and Outcomes Assessment Committee (PROAC) member of M.Sc. in Molecular Chemistry (2020)
- ✚ Board of Studies (BoS) member of master's degree in molecular chemistry (2020)
- ✚ Area Advisory Board (AAB) Member of master's degree in molecular chemistry (2020)
- ✚ Member of DRC & SRC, AICCRS
- ✚ Course writer for IGNOU- M.Sc. (Environment Science) Programme
- ✚ Resource person for National Institute of Educational Planning and Administration (NIEPA), New Delhi
- ✚ NCERT Chemistry Course language editor under MOOC, NCERT, New Delhi
- ✚ Paper Setter and Moderator (CMS601) Principles of Organic Chemistry (PG Course); (CMS604) Click Chemistry (PG Course); (CMS608) Principles of Biomaterials (PG Course); (CMS703) Stereochemistry and asymmetric synthesis (PG Course); (CMS609) Principles of Heterocyclic Chemistry (PG Course); (CMS605) Natural Products Chemistry (PG Course); (CMS901) Advance Molecular Chemistry (Ph.D. Course); (4101-B) Inorganic Chemistry (Special - III) (PG Course); and (101-A) Inorganic Chemistry-I (PG Course).

ACADEMIC HONORS & AWARDS:

- ✚ SERB-Teachers Associateship for research Excellence (TARE) Fellow in October 2022
- ✚ Editorial Board Member American Journal of Physical Chemistry (2019)
- ✚ Advisory Editorial Board Member International Journal of Applied Sciences & Biotechnology (2012)
- ✚ Executive Member International Interdisciplinary Researchers federation (IIRF), India (2019)
- ✚ SERB National Post-Doctoral Fellowship (N-PDF) Award in July 2017
- ✚ Brain Korea-21 Post-Doctoral Fellowship Award in April 2012
- ✚ Extended Senior Research Fellowship, CSIR, New Delhi Award in April 2012
- ✚ Senior Research Fellowship Award in August 2010
- ✚ UGC University Research Fellowship Award in January 2007
- ✚ National Meritorious Scholarship at Matriculation Level Award in July 1997

Editorship and Reviewer:

- ✚ **Guest Associate Editor, Frontiers in Microbiology** [Section: Evolutionary and Genomics Microbiology] (IF- 6.064)
[Special Issue: [Iron-Sulfur Clusters biogenesis in Yeast and Bacteria](#)]
- ✚ **Guest Associate Editor, Frontiers in Cellular and Infection Microbiology** [Section: Fungal Pathogenesis] (IF- 6.073)
Special Issue: [Co-morbidity of COVID-19 and Fungal infections](#)
Topic Editors: Ramendra Pati Pandey; **Vivek Mishra**; Chung-Ming Chang
- ✚ **Guest Editor, SynOpen (IF- 2.5)**
[Special Thematic Issue: [Click Chemistry and Drug Discovery](#)]
Topic Editors: **Vivek Mishra**; Monalisa Mukherjee
- ✚ **Guest Editor, Current Drug Targets (IF- 3.465)**
[Special Thematic Issue: [Nanotherapeutics for autoimmune diseases](#)]

✚ Reviewer of Journals:

ACS Omega ([ACS](#)); ACS Pharmacology & Translational Science ([ACS](#)); The Journal of Organic Chemistry ([ACS](#)); Chemical Communications ([RSC](#)); Polymer Chemistry ([RSC](#)); RSC Advances ([RSC](#)); Dyes and Pigments ([Elsevier](#)); Carbohydrate Polymers ([Elsevier](#)); Reactive & Functional Polymers ([Elsevier](#)); Journal of Molecular Liquids ([Elsevier](#)), Current research in Green and Sustainable Chemistry ([Elsevier](#)); Journal of Applied Polymer Science ([Wiley](#)); Chemistry Select ([Wiley](#)), Bulletin of Korean Chemical Society ([Wiley](#)); Reports in Organic Chemistry ([Dove Press](#)), Analytical Chemistry Letters ([Taylor & Francis](#)); Environmental Science and Pollution Research ([Springer](#)).

TEACHING RESPONSIBILITIES:

- ✚ Ph.D. Course Work [Advance Molecular Chemistry CMS901](#) at **Amity University, NOIDA**. (4 Credit)
- ✚ Master's Courses [Principles of Organic Chemistry CMS601](#) (5 Credit); [Click Chemistry CMS604](#) (4 credit) [Natural Product Chemistry CMS605](#) (4 credit); [Principles of Heterocyclic Compounds CMS606](#) (4 credits) [Principles of Bio-Organic Chemistry CMS608](#) (4 credit), [Stereochemistry and Asymmetrical Synthesis CMS703](#) (4 credit) and [Chemistry of Biomaterials CMS708](#) (4 credit) at **Amity University, NOIDA**.
- ✚ Different master's courses in [Inorganic Chemistry](#) at the **University of Delhi, Delhi, India. July 2018-Dec. 2019**.
 - **Inorganic Chemistry–I Paper 101-A** *Stability Constants of Metal Complexes and Their Applications* (Core course 1; 2 credit)
 - **Inorganic Chemistry (Special - III) Paper 4101-B** *Spectral Techniques in Inorganic Chemistry* (Elective course 1; 2-credit)
 - **Paper 3103 Practical Inorganic Chemistry – I** (Elective practical 1; 4 credit)

- ✚ Biotechnology (H) UG courses (**BM2303**) *Biomaterials* and (**CHM101**) *Applied Chemistry* in Amity Institute of Biotechnology, AUUP.
- ✚ UG's practical course in *Organic Chemistry*, **Banaras Hindu University, Varanasi**.
- ✚ Different UG's *Chemistry course* in Urmila Devi (PG) College, Baraut, Allahabad affiliated by **CSJM Kanpur University, Kanpur, UP**.

PROFESSIONAL ASSOCIATION:

- ✚ **Member American Chemical Society** (Member No. 30114841)
- ✚ **Green Chemistry Network Centre, New Delhi** (Life Member No.0641/17/275)
- ✚ **National Environmental Science Academy** (Life Member No. 1952)
- ✚ **Worldwide Association of Women Forensic Experts** (Member ZY135A)

RESEARCH INTEREST:

- Utilization of Click Chemistry for theragnostic purposes like Drug delivery, autoimmune diseases.
- Green Chemistry approaches environmentally benign reactions.
- Development of Ionic Liquids for biomedical and sensing applications,
- Hydrogels and nanogels for time-dependent drug delivery,
- Controlled radical Polymerization using vinyl monomers for its stimuli responses.
- Graft copolymerization through natural polysaccharides,
- Water remediation through metal adsorption, Dye removal, and degradation.
- Development of magnetic nanoparticles and biowaste management

PROJECTS:

Project-1: SERB-Teachers Associateship for Research Excellence (TARE) Fellow

Synthesis of Condensed Heterocyclic Derivatives and its Clicked Analogs: An Experimental, Computational, and Antimicrobial Exploration". Funded by the Science and Engineering Research Board (SERB) under the Teachers Associateship for Research Excellence (TARE) Scheme. Project Duration: Oct 2022 – Oct 2025. Reference & Cost: TAR/2022/000673 (**18.30 lakhs**) Status: **Ongoing**.

Project-2: SERB-National Post-doctoral Fellow

Synthesis and Characterization of "Green" Controlled radical polymers and their modification via Click Chemistry and their biological application. Funded by the Science and Engineering Research Board (SERB) under the National Post-doctoral Scheme. Project Duration: July 2017 – July 2019. Reference & Cost: SERB/NPDF/2017/000952 (**19.2 lakhs**) Status: **Completed**.

THESIS SUPERVISION:

Number of Ph.D. students guiding: **Four**

Number of M.Sc. student guiding: **Six**

PhD Students

- Sep. 2020- **Nisha Yadav** (Ph.D. pursuing), Amity Institute of Click Chemistry Research and Studies, Amity University, Noida (**Guide**).
Development of surface-functionalized carbon quantum dots for biological applications
- Jan. 2021- **Deeksha Mudgal** (Ph.D. pursuing) Amity Institute of Click Chemistry Research and Studies, Amity University, Noida (**Guide**).
Development of Metal doped Magnetic carbon aerogels and its catalytic applications.
- July 2022- **Ravi Pratap** (Ph.D. pursuing) Amity Institute of Click Chemistry Research and Studies, Amity University, Noida (**Guide**).
Design, Synthesis, and biological applications of novel azoles using multicomponent cascade reactions.
- Jan 2023- **Tapeesh Bharti** (Ph.D. pursuing) Amity Institute of Click Chemistry Research and Studies, Amity University, Noida (**Guide**).
Development of Facile, Robust and Eco-friendly Analytical methods for Quantitative Estimation of Biologically active molecules.

Post-Graduate Major Project Dissertation:

Amity Institute of Click Chemistry Research and Studies, Amity University, Noida (**Guide**).

- + **Garima Narang** (16.01.22-07.5.22): *In silico investigation of the designed doped Graphdiyne with varying the alkyne chain.*
- + **Ritesh Anand** (05.01.22-15.5.22): *Heterocyclic analogs for antimicrobial activities*
- + **Simran Jindal** (05.01.22-15.5.22): *Biological Application of Synthesized Hybrid Hydrogels*

Summer Internship:

Amity Institute of Click Chemistry Research and Studies, Amity University, Noida (**Guide**).

- + **Ritesh Anand** (05.07.21-07.08.21), Title: *Quinoline-1,2,3 triazole hybrids: Design and synthesis through Click Chemistry reaction and its biological applications (collaboration with Jubilant Biosys Limited; B-34 Sector 58, NOIDA, 201301, Uttar Pradesh, India)*
- + **Simran Jindal** (05.07.21-07.08.21), Title: *Porphyrin-1,2,3 triazole hybrids: Design and synthesis through Click Chemistry reaction and its antimicrobial applications (collaboration with Jubilant Biosys Limited; B-34 Sector 58, NOIDA, 201301, Uttar Pradesh, India)*
- + **Isha Chauhan** (05.06.23-16.07.23): *Superconductors for Environmental Applications, their current challenges, and Prospects*

Post-Graduate Term Paper:

Amity Institute of Click Chemistry Research and Studies, Amity University, Noida (**Guide**).

- ✦ **Mallya Mishra** (02.02.23-24.02.23): *Magnetic nano-catalysts as scavengers for catalytic degradation of organic pollutants*
- ✦ **Isha Chauhan** (02.02.23-16.04.23): *Sulfur-doped graphene quantum dots as green catalyst for photocatalytic degradation of Organic dyes*
- ✦ **Mohd. Shujaat Khan** (02.02.23-24.02.23): *Graphitic metal -free nano dots as green catalyst for metal ions sensing.*
- ✦ **Rishi Singh** (05.06.23-14.07.23): *Biohybrid Magnetic Robots in HealthCare Applications* (Integrated B. Tech-M. Tech (Biotechnology)-3rd Semester

NATIONAL PATENTS:

1. A method for the recognition of sweat latent fingerprint using blue-emitting fluorescent carbon quantum dots.
Vivek Mishra, Nisha Yadav, Amarnath Mishra
Indian Patent 2022; Patent Application No. E-2/1491/2022/DEL; Reference No. 202211001435; Filed (2022-01-11). CAP e-filed on 2022-11-03.
2. Nanobiotic Formulations of Quinoline-based-triazole Functionalized Carbon Nano-Dots against Resistant Bacterial Pathogens
Vivek Mishra, Nisha Yadav
Indian Patent 2022; Patent Application No. TEMP/E-1/78253/2022-DEL Reference No. 202211067900; Filed (2022-11-25).
3. Xanthan gum-based copper-doped magnetic carbon aerogel and preparation method thereof
Vivek Mishra, Deeksha Mudgal
Indian Patent 2022; Patent Application No. TEMP/E-1/80925/2022-DEL; Reference No. 202211070419; Filed (2022-12-06).
4. Plant-derived fluorescent self-doped carbon quantum dots (S, N@CQDs) and method thereof
Vivek Mishra, Nisha Yadav
Indian Patent 2023; Patent Application No. TEMP/E-1/75642/2023-DEL; Reference No. 202211047699; Filed (2023-08-22).

INTERNATIONAL PATENTS:

5. Process for preparing disubstituted urea and carbamate compounds from amines, carbon dioxide, and epoxides
Yong-Jin Kim, Vivek Mishra, Guang Meang Son, Jin Ku Cho, Baek Jin Gim
US Patent 2016; Patent No. 9,273,016 B2; Filed (2013-12-20), Published (2016-03-01).
6. Process for preparing disubstituted urea and carbamate compounds from amines, carbon dioxide, and epoxides.
Yong-Jin Kim, Vivek Mishra, Guang Meang Son, Jin Ku Cho, Baek Jin Gim
US Patent 2016; Patent No. 9,233,939 B2; Filed (2013-12-20), Published (2016-01-12).
7. Manufacturing method of substituted urea and carbamate-based compounds from amine, carbon dioxide and epoxy compound
Yong-Jin Kim, Vivek Mishra, Guang Meang Son, Jin Ku Cho, Baek Jin Gim

- Korean Patent 2015; Patent No. 10-2015-0055767** Filed (2013-11-14), Published (2015.05.22).
8. Method for producing substituted urea and carbamate compounds from amine, carbon dioxide, and epoxy compound.
Yong-Jin Kim, Vivek Mishra, Guang Meang Son, Jin Ku Cho, Baek Jin Gim
- Japanese Patent 2015; Patent No. JP 2015-93870 A** Filed (2013-12-27), Published (2015.03.13)

Copyright

1. 'Fluorescent Carbon Quantum Dots Produced from Natural Resources for Sweat Latent Fingerprint Recognition Using Artificial Intelligence program'
Vivek Mishra, Nisha Yadav
Diary No. 864/2023-CO/L; Filed (2023-01-20) Type: **Literary/ Dramatic**

PUBLICATIONS

1. In(III)-catalyzed C3- alkylation of indoles with 2H-chromen-2-ol derivatives
Anjali Kaushal, Jagadeesh Bhukya, Ashok Kumar Yadav, **Vivek Mishra**, Deepak Kumar
Tetrahedron Letters, **2023**, 154742 (**IF 1.8**)
<https://doi.org/10.1016/j.tetlet.2023.154742>
2. Luminous Insights: Exploring Fluorescent Chemosensors for Metal-Ion (Al^{+3} , Cu^{+2} , Fe^{+3} , Zn^{+2}) Detection
Eksha Guliani, Akanksha Taneja, Kumar Rakesh Ranjan*, **Vivek Mishra***
Journal of Fluorescence, **2023** (**IF 2.7**)
<https://doi.org/10.1007/s10895-023-03419-5>
3. From Traditional to Greener Alternatives: Potential of Plant Resources as a Biotransformation Tool in Organic Synthesis
Vinay Kumar, Rituparna Saha, Satyaki Chatterjee*, **Vivek Mishra***
Reaction Chemistry & Engineering **2023** (**IF 3.9**)
<https://doi.org/10.1039/D3RE00346A>
4. In-situ synthesis of ionic liquid-based-carbon quantum dots as fluorescence probe for hemoglobin detection
Nisha Yadav, Deeksha Mudgal, **Vivek Mishra***
Analytica Chimica Acta, **2023**, 341502 (**IF 6.43**)
<https://doi.org/10.1016/j.aca.2023.341502>
5. A Review on the Synthesis, Properties, and Applications of Graphyne.
Garima Narang, Divyam Bansal, Shaina Joarder, Prashant Singh, Loveneesh Kumar, **Vivek Mishra**, Sangeeta Singh, Kaniki Tumba, Kamlesh Kumari
FlatChem **2023** (**IF 6.20**)
<https://doi.org/10.1016/j.flatc.2023.100517>
6. Recent advancements in triazole-based click chemistry in Cancer drug Discovery and Development.
Arun Kumar, Ashok Kumar Yadav*, **Vivek Mishra***, Deepak Kumar*
SynOpen **2023**, 7 (02), 186-208 (**Very Special Theme: Virtual Collection Click Chemistry and Drug Discovery**) (**IF 2.50**)

<https://doi.org/10.1055/s-0042-1751452>

7. Exploring the binding of Ajmalicine, Dexamethasone and Acetaminophen to Enterococcus faecalis Homoserine dehydrogenase.
Jyoti Chaudhary, Anil Kumar Mavi, Nagendra Singh, Vijay Kumar Srivastava, Anupam Jyoti, Sanket Kaushik, **Vivek Mishra***
Quaderns Journal, **2023**, 11 (3), 294-307 (IF 0.05)
[10.37897.QUADERNS.2023.V11I3.23.40451](https://doi.org/10.37897.QUADERNS.2023.V11I3.23.40451)
8. Synthesis and photocatalytic applications of functionalized carbon quantum dots
Nisha Yadav, Rahul P. Gaikwad, **Vivek Mishra***, Manoj B. Gawande*
Bulletin of the Chemical Society of Japan, **2022**, 95, 1638-1670
<https://doi.org/10.1246/bcsj.20220250> (IF 3.81)
9. Recent development in Nanoencapsulation and delivery of Natural Bioactives through Chitosan scaffolds for various biological applications
Nisha Yadav, Deeksha Mudgal, Ritesh Anand, Simran Jindal, and **Vivek Mishra***
International Journal of Biological Macromolecules, **2022**, 220, 537-572
[10.1016/j.ijbiomac.2022.08.098](https://doi.org/10.1016/j.ijbiomac.2022.08.098) (IF 8.87).
10. Sustainable Approach for Graphene Formation from Natural Resources and Bio-Wastes for Electronic Applications
Simran Jindal, Ritesh Anand, Niharika Sharma, Nisha Yadav, Deeksha Mudgal, Ruby Mishra, **Vivek Mishra***
ACS Applied Electronic Materials, **2022**, 4 (5), 2146–2174
<https://doi.org/10.1021/acsaelm.2c00097> (IF 5.07).
11. Visible-light-accelerated copper-catalyzed [3+2] cycloaddition of N-tosylcyclopropylamines with alkynes/alkenes
Manoj Kumar, Shalini Verma, **Vivek Mishra**, Oliver Reiser, Akhilesh Verma
Journal of Organic Chemistry **2022**, 87(9), 6263–6272.
DOI: <https://doi.org/10.1021/acs.joc.2c00491> (IF 3.67).
12. Amino acid-derived biopolymers: Recent advances and biomedical applications
SS Gupta, **Vivek Mishra***, MD Mukherjee, P Saini, KR Ranjan
International Journal of Biological Macromolecules **2021** 188, 542-567
DOI: [10.1016/j.ijbiomac.2021.08.036](https://doi.org/10.1016/j.ijbiomac.2021.08.036) (IF 8.87).
13. Significance of Re-engineered Zeolites in Climate Mitigation –A Review for Carbon Capture and Separation
S Chatterjee, S Jeevanandham, M. Mukherjee, DVN Vo, **Vivek Mishra***
Journal of Environmental Chemical Engineering **2021** 9 (5), 105957
DOI: [10.1016/j.jece.2021.105957](https://doi.org/10.1016/j.jece.2021.105957) (IF 8.20).
14. Magnetite nanoparticles as sorbents for dye removal: a review
S K Panda, I Aggarwal, H Kumar, L Prasad, A Kumar, A Sharma, DVN Vo, DV Thuan, and **Vivek Mishra***
Environmental Chemistry Letters **2021**, 19 (3), 2487-2525,
DOI: [10.1007/s10311-020-01173-9](https://doi.org/10.1007/s10311-020-01173-9) (IF 16.95)

15. Recent advances in the synthesis of heterocycles and pharmaceuticals from the photo-electrochemical fixation of Carbon dioxide,
HL Ngo, DK Mishra, **Vivek Mishra**, CC Truong*
Chemical Engineering Science (Special Issue: CO₂ Mitigation and Transformation: Innovative Thermochemical, Photochemical, and Electrochemical Approaches) **2021**, 229, 116142
DOI: [10.1016/j.ces.2020.116142](https://doi.org/10.1016/j.ces.2020.116142) (IF 5.23)
16. Click Triazole as a linker for drug repurposing against SARs-CoV-2: A greener approach in race to find COVID- 19 therapeutic
S Chatterjee, N Kumar, H Sehrawat, N Yadav, **Vivek Mishra***
Current Research in Green and Sustainable Chemistry **2021** 4, 100064
[DOI: 10.1016/j.crgsc.2021.100064](https://doi.org/10.1016/j.crgsc.2021.100064). (IF= new)
17. Extraction, isolation, and detection methods used for antihistamines drugs from biological matrices- a review.
A Mishra*, M Sai, S Rani, C Singh, **Vivek Mishra**
International Journal of Medical Toxicology & Legal Medicine **2021**, 25 (3-4), 155-163
18. Improved isolation and detection of Malathion insecticide from forensic samples
A Mishra*, **Vivek Mishra**, A Srivastava
International Journal of Medical Toxicology & Legal Medicine **2021**, 25 (3-4), 148-154
19. Detection and Determination of the Levels of Physiologically Active Substances in Non-Alcoholic Beverages
A Behl, A Mishra*, GP Sharma, **Vivek Mishra**
International Journal of Medical Toxicology & Legal Medicine **2021**, 25 (3-4), 164-174
20. Green Chemistry-Remedy to Societal Hygiene: A Graphical Review
S Chatterjee and **Vivek Mishra***
Current Research in Green and Sustainable Chemistry (Very Special Issue: Green Chemistry in India for Societal Needs: Pollution, Healthcare, Education and Circular Economies), **2020**, [10.1016/j.crgsc.2020.100025](https://doi.org/10.1016/j.crgsc.2020.100025) (IF= New)
21. Cyclic Polymer of N-vinylpyrrolidone via ATRP protocol, kinetic study, and Concentration effect of polymer on click chemistry in solution
Vivek Mishra* and R Kumar
Polymer Science Series B, **2019**, 61(6), 743–751. DOI: [10.1134/S1560090419060095](https://doi.org/10.1134/S1560090419060095) (IF 1.16)
22. One-Pot Synthesis of Disubstituted Urea from CO₂, Propylene Oxide, and Amines Catalyzed by Imidazolium-Tetraiodoindate
GM Son, CC Truong, DK Mishra, **Vivek Mishra***, and YJ Kim*
Bulletin of the Korean Chemical Society, **2018**, 39 (2), 174-183. DOI: [10.1002/bkcs.11363](https://doi.org/10.1002/bkcs.11363) (IF 1.71)
23. Ruthenium-Na₂CO₃ catalyzed one-pot synthesis of ring hydrogenated carbamate from aromatic amine and propylene carbonate.
Vivek Mishra, JK Cho, SH Shin, YW Suh, HS Kim, and YJ Kim*
Applied Catalysis A: General **2014**, 487, 82–90. DOI: [10.1016/j.apcata.2014.09.013](https://doi.org/10.1016/j.apcata.2014.09.013) (IF 5.69)
24. One pot catalytic NO₂ reduction, ring hydrogenation, and N-alkylation from nitroarenes to generate alicyclic amines using Ru/C-NaNO₂
SG Oh, **Vivek Mishra**, JK Cho, BJ Kim, HS Kim, Y-W Suh, H-j Lee, HS Park and YJ Kim*

- Catalysis Communications* **2014**, 43, 79-83. DOI: [10.1016/j.catcom.2013.09.012](https://doi.org/10.1016/j.catcom.2013.09.012) (IF 3.95)
25. Thermo-responsive ureido-derivatized polymers: Effect of quaternization on UCST properties
Vivek Mishra, S-H Jung, HM Jeong, and H-il Lee*
Polymer Chemistry **2014**, 5(7), 2411-2416. DOI: [10.1039/C3PY01648J](https://doi.org/10.1039/C3PY01648J) (IF 4.69)
26. Triazole containing hydrogels for time-dependent sustained drug release.
Vivek Mishra, S-H Jung, J M Park, H M Jeong and H-il Lee*
Macromolecular Rapid Communications **2014**, 35(4), 442-446. DOI: [10.1002/marc.201300585](https://doi.org/10.1002/marc.201300585) (IF 4.54)
27. Grafting of 4-amino antipyrine from guar gum substrates using graft atom transfer radical polymerization (ATRP) process.
Vivek Mishra and R Kumar*
Carbohydrate Polymers **2011**, 86, 296-303. DOI: [10.1016/j.carbpol.2011.04.052](https://doi.org/10.1016/j.carbpol.2011.04.052) (IF 11.93)
28. Synthesis, and characterization of five-arm star polymer of N-vinyl pyrrolidone through ATRP based on glucose.
Vivek Mishra and R Kumar
Carbohydrate Polymers **2011**, 83, 1534-1540. DOI: [10.1016/j.carbpol.2010.10.004](https://doi.org/10.1016/j.carbpol.2010.10.004) (IF 11.93)
29. Uptake of hazardous heavy metal ions by the aqueous solution of poly (acrylamide) prepared through atom transfer radical polymerization process.
Vivek Mishra and R Kumar*
Journal of Applied Polymer Science **2013**, 128, 3295- 3307. DOI: [10.1002/app.38521](https://doi.org/10.1002/app.38521) (IF 3.46)
30. RAFT polymerization of N-vinyl pyrrolidone using prop-2-ynyl morpholine-4- carbodithioate as a new chain transfer agent
Vivek Mishra and R Kumar*
Journal of Applied Polymer Science **2012**, 124, 4475-4485. DOI: [10.1002/app.35480](https://doi.org/10.1002/app.35480) (IF 3.46)
31. Graft copolymerization of Carboxymethylcellulose: An overview
Vivek Mishra and R Kumar*
Trends in Carbohydrate Research **2012**, 14(4), 1-17.
DOI: http://www.trendscarbo.com/getf_shoppingcart.php?id=136303364 (Invited) (IF 0.15)
32. Living Radical Polymerization: A Review
Vivek Mishra and R Kumar*
Journal of Scientific Research, **2012**, 56, 141-176. DOI: (Invited)
33. Coumarin-based polymer, and its silver nanocomposites as advanced antibacterial agents: Synthetic path, kinetics of polymerization, and applications
A Srivastava, **Vivek Mishra**, P Singh, and R Kumar*
Journal of Applied Polymer Science **2012**, 126, 395-407. DOI: [10.1002/app.36999](https://doi.org/10.1002/app.36999) (IF 3.46)
34. Comparative study of thermal degradation behaviour of graft copolymers of polysaccharides and vinyl monomers
A Srivastava, **Vivek Mishra**, P Singh, A Srivastava, and R Kumar*
Journal of Thermal Analysis and Calorimetry **2012**, 107, 211-223. DOI: [10.1007/s10973-011-1921-y](https://doi.org/10.1007/s10973-011-1921-y) (IF 5.25)

35. Vanadium (V)/Mandelic acid-initiated graft copolymerization of acrylamide onto guar gum in an aqueous medium
A Srivastava, **Vivek Mishra**, S K Singh, and R Kumar*
Journal of Applied Polymer Science **2010**, 115, 2375-2385. DOI: [10.1002/app.31172](https://doi.org/10.1002/app.31172) (IF 3.46)
36. One pot synthesis and characterization of industrially important graft copolymer (GOH-g-ACM) by using peroxymonosulphate/ mercapto succinic acid redox pair
A Srivastava, **Vivek Mishra**, S K Singh and R Kumar*
E- Polymers **2009**, 6, 1-14. DOI: [10.1515/epoly.2009.9.1.58](https://doi.org/10.1515/epoly.2009.9.1.58) (IF 3.7)

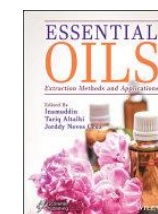
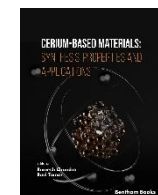
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BOOKS (Authored/Edited)

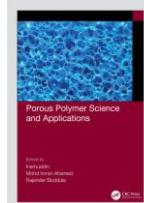
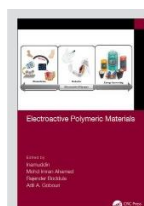
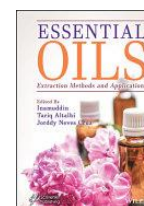
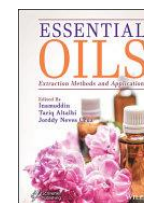
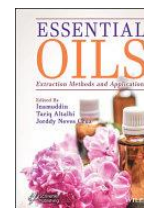
- Book Editor, CRC Press** (Taylor and Francis Group)
Functional Fluorescent Materials: Multifaceted applications in Human healthcare
- Book Editor, CRC Press** (Taylor and Francis Group)
Nanotherapeutics for inflammatory arthritis: Design, diagnosis, and treatment
- Vivek Mishra*** and Rajesh Kumar, Functional controlled/ living radical polymers: Synthesis, kinetics, and physico-chemical properties, (2013) *Lambert Academic Publishing* GmbH & Co. KG, Germany, [ISBN: 978-3-659-35577-6]

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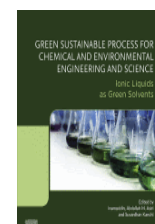
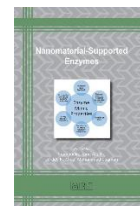
- Book:** Next-generation Anti-microbial Nanocoating's for Medical Devices and Implants
Chapter: Organic-Inorganic hybrid for anti-microbial coating strategies over the medical device and implants [Chapter-7]
Author: Nisha Yadav, Deeksha, Vivek Mishra*
Publisher: Elsevier
Year: 2023
ISBN Under Process
- Book:** Cerium-based material: synthesis, properties, and applications
Chapter: Catalytic Applications of Cerium-based Material [Chapter-3]
Author: Nisha Yadav, Deeksha Mudgal, and Vivek Mishra*
Publisher: Bentham Books
Year: 2023
ISBN 978-981-5080-09-4 [Link]
- Book:** Essential Oils: Extraction Methods and Applications
Chapter: A Methodological Approach of Plant Essential Oils and their Isolated Bioactive Components for Antiviral Activities [Chapter-1]
Author: Kunal Sharma*, Vivek Mishra*, Kumar Rakesh Ranjan, Nisha Yadav, Mansi Sharma
Publisher: Wiley-Scrivener
Year: 2023
ISBN 978-111-98-2935-5 [Link]



4. **Book:** Essential Oils: Extraction Methods and Applications
Chapter: Essential Oils based Biopesticides [Chapter-19]
Author: Nishant Sharma, Kunal Sharma, Sachchidanand Soham Gupta, Kumar Rakesh Ranjan, Vivek Mishra*, Maumita Das Mukherjee
Publisher: Wiley-Scrivener
Year: 2023
ISBN 978-111-98-2935-5 [Link]
5. **Book:** Essential Oils: Extraction Methods and Applications
Chapter: Essential Oils: Chemical Composition and Methods of Extraction [Chapter-37]
Author: Arshi Gupta, Kumar Rakesh Ranjan, Nisha Yadav, Deeksha, Vivek Mishra*
Publisher: Wiley-Scrivener
Year: 2023
ISBN 978-111-98-2935-5 [Link]
6. **Book:** Essential Oils: Extraction Methods and Applications
Chapter: Plant essential oils and their constituents for therapeutic benefits [Chapter-42]
Author: Monika Rani, Simran Jindal, Ritesh Anand, Niharika Sharma, Kumar Rakesh Ranjan, Maumita Das Mukherjee, Vivek Mishra*
Publisher: Wiley-Scrivener
Year: 2023
ISBN 978-111-98-2935-5 [Link]
7. **Book:** Aerospace Polymeric Materials
Chapter: Electro-active Polymeric Shape Memory Composites for Aerospace Application [Chapter-8] Pg 189-210
Author: Mamata Singh, Taha Gulamabbas, Benjamin Ahumuza, N.P. Singh, Vivek Mishra*
Publisher: Wiley-Scrivener
Year: 2023
ISBN 978-1-119-90489-2 [Link]
8. **Book:** Electroactive Polymeric Materials: Fundamentals and Application
Chapter: Electroactive Polymers in Industrial Sector [Chapter-16]
Author: Shubham Pandey, Simran Aggrawal, Vivek Mishra*
Publisher: CRC press U.K.
Year: 2022
ISBN: 978-103-20-0280-4 [link]
9. **Book:** Porous polymers Science and applications
Chapter: Porous polymers for heterogeneous catalysis [Chapter-6]
Author: Simran Aggrawal, Shubham Pandey, Vivek Mishra*
Publisher: CRC press U.K.
Year: 2022
ISBN: 978-036-77-7058-7 [Link]
10. **Book:** Metal-Organic Frameworks (MOFs) as Catalysts
Chapter: Chiral Metal-Organic Frameworks for Asymmetrical Catalysis [Chapter-19]
Author: Bhawna Dwivedi, Pawan Kumar Mishra, Vivek Mishra*
Publisher: Springer Nature
Year: 2022 [493–513]
ISBN 978-981-16-7958-2 [Link]



11. **Book:** Enzyme immobilized nanoparticles towards biosensor fabrication
Chapter: Use of Nanomaterials-based Enzymes in Vaccine Production and Immunization [Chapter-9]
Author: M Singh, P Nzeyimana, A Benjamin, A Soumya, N P Singh, Vivek Mishra*
Publisher: **Materials Research Foundations LLC, USA**
Year: 2022 [126, 240-260]
ISBN 978-981-16-7958-2 [[Link](#)]
12. **Book:** Advanced Functional Piezoelectric Materials and Applications
Chapter: Piezoelectric materials-based phototronics [Chapter-4]
Author: Mamata Singh, Ahumuza Benjamin, N. P. Singh, and Vivek Mishra*
Publisher: **Materials Research Foundations LLC, USA**
Year: 2022 [117-137]
ISBN 978-164-49-0209-7 [[Link](#)]
13. **Book:** M.Sc. (Environment Chemistry)
Chapter: **Fundamentals of Environmental Chemistry** [Chapter-1]
Module: Environmental Chemistry, Unit 1
Author: Vivek Mishra*
Year: 2021
Publisher: **IGNOU, New Delhi**
ISBN: 978-939-07-7359-6 [[link](#)]
14. **Book:** Green Sustainable Process for Chemical and Environmental Engineering and Science
Chapter: Organic Carbonate as a green solvent for Bio-Catalysis [Chapter-13]
Author: Cong Chien Truong, Dinesh Kumar Mishra, Vivek Mishra*
Publisher: **Elsevier**
Year: 2021
ISBN 978-012-81-9721-9 [[Link](#)]



CONFERENCES/WEBINARS ORGANIZED:

1. **International Conference** on "Role of Molecular Chemistry in Drug Design and Development" (Hybrid) organized by Amity Institute of Click Chemistry Research and Studies, Amity University Noida Campus in associated with Drug Design and Development Cluster, Amity Universe, held on 29th - 30th June 2022. (**Joint Secretary**)
2. **International Symposium** on "Click Chemistry a powerful tool in organic synthesis, material Science, biomedicine and beyond" (online) organized by Amity University Noida Campus held on 20th -21st August 2021. (**Convener**)
3. Part of the Organizing Committee of **Startup Expo** as **JURY MEMBER** during **Virtual 3rd International Conference on Entrepreneurship, Innovation and Leadership (ICEIL-2020)** organized by Amity University Noida Campus held on 17th -19th December 2020. (**Member**)
4. **Five Days Faculty Development Programme (FDP)** on "Recent advances on Molecular Chemistry and Functional materials" organized by the AICCRS under the umbrella of Amity University Noida Campus held on 17th to 21st August 2020. (**Convener**)
5. **XV Junior-National Organic Symposium Trust (J-NOST) 2019**, organized by Department of Chemistry, University of Delhi, Delhi-110007, INDIA held on 18-21 October 2019. (**Member**)
6. National Conference on "Recent Trends in Chemical Sciences" and RSC Workshop on "Periodic Table: Boon for Mankind" organized by Green Chemistry Network Centre, Department of Chemistry,

University of Delhi, Delhi-110007, INDIA held on 30 August-1st September 2019. (**Member**)

7. 6th World Congress on Nano-medical Sciences (**Chemistry Biology interface: Synergistic in new frontiers & Science and Technology for the future of mankind (ISNSCON-2018)**) organized by University of Delhi and Jamia Hamdard at Vigyan Bhawan, Delhi, INDIA held on 7-9 January 2019. (**Member**)
8. National Conference on **Chemistry for Human Health and Environment (CHHE-2018)** at Department of Chemistry, University of Delhi, Delhi-110007, INDIA held on 15-16 December 2018. (**Member**)
9. International conference on **sustainable initiatives in water management**, Manav Rachna University, Faridabad and Green Chemistry Network Centre, Delhi University March 06, 2018. (**Member**)

CONFERENCES:

ORAL TALK/ PRESENTATION

1. **The Impact of Click Chemistry** under *Gyan Ganga Program State level Online Training-workshop under subject specific short-term programme "Initiative for Teaching Learning excellence in Chemistry"* organized by Directorate of Higher Education, Bikaner, and Govt Dungar College, Bikaner, Rajasthan from 18-23 Jan 2021. (Invited talk as **Resource Person**).
2. **Role of π - π stacking in triazole ring containing hydrogels for sustained drug release**, **6th World Congress on Nano- medical Sciences (Chemistry Biology interface: Synergistic in new frontiers & Science and Technology for the future of mankind (ISNSCON-2018))** organized by University of Delhi and Jamia Hamdard at Vigyan Bhawan, Delhi, INDIA held on 7-9 January 2019. (Oral Presentation)
3. **Triazole ring containing hydrogels for sustained drug release**, **International workshop and symposium on green chemistry & technology**; PG Department of Chemistry, Govt. Dungar College, Bikaner; 15-17 October 2018. (Oral Presentation)
4. **National workshop on Thieme Chemistry: Science of Synthesis**; Department of Chemistry, University of Delhi on 28 September 2018. (Oral Presentation)
5. **Sustainable Route for the Production of Environmentally Friendly Polyurethane precursors through Amines, CO₂, and Biomass**, **International Conference on Advancing Green Chemistry: Building a Sustainable Tomorrow**; Green Chemistry Network Centre, Department of Chemistry, University of Delhi & Hindu College, University of Delhi; 3-4 October 2017 (Oral Presentation, OP-15)
6. **ATRP of 4-aminoanipyrine from guar gum in ecofriendly environment**; **National Seminar on Impact of Environmental Changes on Human Life**; Sadanlal Sanwaldas Khanna Girls' Degree College, Allahabad; 20-21 November 2010. (Oral Presentation A-109)

POSTER PRESENTATION

7. **Biological application of synthesized hybrid hydrogels**; International conference on "**Role of Molecular Chemistry in Drug Design & Development (RMCDDD)**", Amity University, Noida; 29 June 2022 (Poster Presentation by Ms. Simran Jindal PP-21).
8. **Heterocyclic Analogs for Antimicrobial activity**; International conference on "**Role of Molecular Chemistry in Drug Design & Development (RMCDDD)**", Amity University, Noida; 29 June 2022 (Poster Presentation by Mr. Ritesh Anand PP-64).
9. **Cu-doped magnetic nanoparticle-based carbon aerogel for catalytic coupling reaction for effective synthesis of Isatin Nitroene** International conference on "**Role of Molecular Chemistry in Drug Design & Development (RMCDDD)**", Amity University, Noida; 29 June 2022 (Poster Presentation by Ms. Deeksha Mudgal PP-72).

10. [Antibacterial Activity of Functional Ionic Liquid-capped Carbon Quantum Dots: Green synthesis using Tecoma Stans Bignoniaceae crude extract and biological evaluation](#); International conference on “[Role of Molecular Chemistry in Drug Design & Development \(RMCDDD\)](#)”, Amity University, Noida; 29 June 2022 (Best poster award to Mrs. Nisha Yadav PP-43).
11. [Cu-Fe₃O₄ nanoparticle doped Xanthan gum based magnetic carbon aerogel for catalytic degradation of cationic and anionic dyes](#) Centenary Year conference on “[Recent advances in Nano Medical Science \(RANMS-2022\)](#)”, University of Delhi, 22 June 2022 (Poster Presentation by Ms. Deeksha Mudgal PP-21).
12. [Copper-doped magnetic carbon aerogel for catalytic coupling reaction](#) Centenary Year conference on “[Recent advances in Nano Medical Science \(RANMS-2022\)](#)”, University of Delhi, 22 June 2022 (Poster Presentation by Ms. Deeksha Mudgal PP-21).
13. [Nanobiotic formulation of Quinoline-based-triazole functionalized Carbon Nano-dots against Bacterial pathogens](#); Centenary Year conference on “[Recent advances in Nano Medical Science \(RANMS-2022\)](#)”, University of Delhi, 22 June 2022. (Poster Presentation by Mrs. Nisha Yadav PP-29).
14. [A highly efficient functionalized chelating polymer sorbent for rapid and selective extraction of ferrous ions from water sample](#), UGC Funded National Conference on “[Recent advances in chemical sciences towards Green & Sustainable Environment-Swachh Bharat Abhiyaan Perspective](#)”; Aditi Mahavidhyalaya, Bawana; University of Delhi; 10-11th October 2017. (Poster Presentation PP-13)
15. [Functionalized silica based organic-inorganic hybrid adsorbent for rapid and selective extraction of copper ions from various samples](#), International Conference on [Advancing Green Chemistry: Building a Sustainable Tomorrow](#); Green Chemistry Network Centre, Department of Chemistry, University of Delhi & Hindu College, University of Delhi; 3-4 October 2017 (Poster Presentation PP-08)
16. [One pot synthesis of ruthenium-catalyzed ring hydrogenated carbamate from aromatic amine and propylene carbonate](#); 2014 KSIEC Spring Meeting; The Korean Society of Industrial and Engineering Chemistry, South Korea; April 30- May 02, 2014 (PP-300)
17. [Synthesis and Characterization of Guar Gum based ATRP Initiator and Studies on Graft copolymerization of 4-Aminoantipyrine](#); POLYCHAR19–World Forum on Advanced Materials; Tribhuvan University & Nepal Polymer Institute, Kathmandu, NEPAL; Mar21-24, 2011
18. [Functionalization of Carbon Nano Tubes by in situ Living Radical Polymerization Process](#); Multifunctional material; Depart. of Physics, Banaras Hindu University, Varanasi; Dec 7- 9, 2010 (Poster Presentation)
19. [One pot synthesis and characterization of industrially important graft copolymer](#); POLYCHAR 16-World Forum on Advanced Materials; POLYCHAR World forum of advance materials and University of Lucknow, Lucknow; Feb 17-21, 2008 (Poster Presentation-91)
20. [Light Emitting Organic Polymers](#); (APACON-2008); Advances in Polymer Science and Technology; Indian Habitat Centre, Indian Institute of Technology, Delhi; Jan 28-31, 2008 (Poster Presentation CONP-PO-10)
21. [Reversible Addition-Fragmentation Chain Transfer Polymerization of N-Vinyl Pyrrolidone using prop-2-ynyl morpholine-4-carbodithioate: A new RAFT Agent](#); Current concepts & Frontier advances in Science Educational Research; Department of Chemistry, TD College, Jaunpur; March 05-06, 2011 (PP)
22. [Synthesis and characterization of L-tryptophan based vinyl monomer and their controlled polymerization by RAFT Process](#); (ETCS-2011) Emerging Trends in Chemical Sciences; Department of Chemistry, Banaras Hindu University, Varanasi; Feb.19-20, 2011.
23. [Synthesis and Characterization of Coumarin Based Allyl Monomer and its Atom Transfer Radical Polymerization using 2-Bromoisobutyryl Bromide in toluene](#); 13th CRSI-2011; NISER and KIIT University, Bhubaneswar, INDIA; Feb. 4-6, 2011 (Poster Presentation)
24. [Well-Defined Synthesis of Polymers through Atom Transfer Radical polymerization and its cyclization using](#)

- [Click chemistry](#); 12th CRSI and 4th CRSI-RSC Symposium in Chemistry; Indian Institute of Chemical Technology, Hyderabad; Feb 04-07, 2010. (PP-117)
25. International conference on [sustainable initiatives in water management](#), Manav Rachna University, Faridabad and Green Chemistry Network Centre, Delhi University March 06, 2018, (Organizer/Participant)
26. International seminar on “[Effect of pollution on human health](#)” jointly organized by Department of chemistry, University of Delhi and Indian Academy of biomedical sciences (IABS) on 1st December 2017.
27. National Symposium on [Current trends in Chemistry](#); Deptt. of Chemistry, Banaras Hindu University, Varanasi, INDIA; March 24-25, 2007
28. 14th CRSI National Symposium in Chemistry (NSC-14); CSIR-NIIST Thiruvananthapuram, INDIA; Feb. 3-5, 2012.
29. Attended all the lectures and participated in “[Molecular Spectroscopy: Theory, Instrumentation and Applications](#)”; Science Academies’ lecture Workshop; Department of Chemistry, Banaras Hindu University, Varanasi; March 02-03, 2012.
30. “[Short Course on Polymer Characterization](#)” POLYCHAR19–World Forum on Advanced Materials; Tribhuvan University and Nepal Polymer Institute, Kathmandu, NEPAL; March 20, 2011
31. Workshop on [Multifunctional material](#); Department of Physics, Banaras Hindu University, Varanasi; Dec 6, 2010.

References

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Amity University Uttar Pradesh, Sector-125 NOIDA- 201303,
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E-mail: mmukherjee@amity.edu

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E-mail: averma@acbr.du.ac.in
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Banaras Hindu University, India,
E-mail: orajesh@bhu.ac.in