

BIO-DATA

Dr. Ruchi Chawla

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Educational Qualification

B.Sc.	Ewing Christian College, Prayagraj
M.Sc.	University of Allahabad, Prayagraj
Ph. D.	University of Allahabad, Prayagraj

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Awards/Scholarships

1. **Gold medalist** for securing the highest marks in the mathematics group in B. Sc., 2007, Ewing Christian College, Prayagraj.
2. **Principal's medal winner** given to the Best All-Round Student at the graduation level (science), 2007, Ewing Christian College, Prayagraj.
3. **Highest marks scorer** in M.Sc. (Chemistry), 2010, University of Allahabad.
4. Declared successful in **CSIR-UGC-NET examination, UGC-JRF**, All India Rank-**371**, Subject- Chemical Science, Exam held on 20-06-2010 (Roll no.-123020).
5. Selected among all the participants at **IX J-NOST** conference held during December 04-06, 2013 at **IISER Bhopal** and invited to give a talk at the **XVI Organic Chemistry Conference**, held during April 4-7, 2014 at Hotel Jaypee Palace Agra organized by NOST Council, India.
6. **Indian Chemical Society Research Excellence Award** in the Organic & Biochemistry Section of the 57th Annual Convention of Chemists, 2020 & International Conference on "Recent Trends in Chemical Sciences (RTCS-2020)" organized by the Indian Chemical Society, Kolkata during December 26 – 29, 2020.
7. **First Prize** winner for presenting a paper entitled "**Vinyl epoxide modified chitosan as a synthetic handle for application-based further functionalization**" in the 9th Indian

Chitin & Chitosan Society Symposium 2021 (9th ICCSS 2021) during 26th to 28th February 2021, organized by Visvesvaraya National Institute of Technology (Nagpur) in collaboration with National Institute of Technology (Agartala) and Indian Chitin & Chitosan Society.

Experience

Fellowships held:

Name of fellowship	Organization	Dates From To	Name of Sponsoring Agency
Junior Research Fellow (JRF)	University of Allahabad	December 24, 2010 to December 23, 2012	DST (File No. SR/S1/OC-22/2010)
Senior Research Fellow (SRF)	University of Allahabad	December 24, 2012 to November 30, 2013	DST (File No. SR/S1/OC-22/2010)
UGC-CRET fellowship	University of Allahabad	1/12/2013 to 10/07/2014	UGC
DST Women Scientist-Scheme A	MNNIT Allahabad	20/03/2019 TO 19/03/2022	DST (SR/WOS-A/CS-54/2018)

Chronological record of employment:

Date/Month/Year From To	Designation	Nature of work	Name of Organization
03/08/2022 to ongoing	Ad hoc Faculty	Teaching (B. Tech. I & II)	MNNIT Allahabad
08/08/2018 19/03/2019	Guest Faculty	Teaching (B.Sc. & M. Sc.)	University of Allahabad
21/07/2017 31/05/2018	Guest Faculty	Teaching (B. Tech. I & II)	MNNIT Allahabad

27/07/2016 30/04/2017	Guest Faculty	Teaching (B.Sc. & M. Sc.)	Ewing Christian College, Allahabad
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List of Publications

1. Folate receptor targeted chitosan and polydopamine coated mesoporous silica nanoparticles for photothermal therapy and drug delivery, Prabha Bhartiya, **Ruchi Chawla** and Pradip K. Dutta, *J. Macromol. Sci. A* **2022**, DOI: 10.1080/10601325.2022.2135443. Impact factor: **2.168**
2. pH-Responsive Charge-Convertible *N*-Succinyl Chitosan-Quercetin Coordination Polymer Nanoparticles for Effective NIR Photothermal Cancer Therapy, Prabha Bhartiya, **Ruchi Chawla** and Pradip K. Dutta, *Macromol. Chem. Phys.* **2022**, 2200140. Impact factor: **2.996**. doi.org/10.1002/macp.202200140
3. Click-synthesized non-substituted triazole modified chitosan from CaC₂ as a novel antibacterial and antioxidant polymer, Pal Manisha D., **Ruchi Chawla** and P. K. Dutta, *J. Polym. Res.* **2022**, 29: 179. Impact factor: **3.061**. doi.org/10.1007/s10965-022-03032-3
4. Chitosan for wound healing in the light of skin tissue engineering and stem cell research, book chapter, Springer Nature Singapore, **Ruchi Chawla** and P.K. Dutta, Ed. Faheem A. **2021**, 351-379 in *Engineering Materials for Stem Cell Regeneration*. ISBN:978-981-16-4420-7, DOI: 10.1007/978-981-16-4420-7_14
5. A photocatalyst-free visible-light mediated solvent-switchable route to stilbenes/vinyl sulfones from β -nitrostyrenes and arylazo sulfones, **Ruchi Chawla**,* Shefali Jaiswal, P. K. Dutta and Lal Dhar S. Yadav, *Org. Biomol. Chem.* **2021**, 19, 6487-6492. Impact factor: **3.890**. <https://doi.org/10.1039/D1OB01028J>

6. Chitosan modified by organo-functionalities as an efficient nanoplatform for anti-cancer drug delivery process, S. Jaiswal, P.K. Dutta, S. Kumar, **Ruchi Chawla**, *J. Drug Del. Sci. Technol.* **2021**, *62*, 102407. Impact factor: **5.062**, <https://doi.org/10.1016/j.jddst.2021.102407>
7. Denitrative thiocyanation of β -nitrostyrenes through visible light photoredox catalysis: An easy access to (*E*)-vinyl thiocyanates, Ritu Kapoor, **Ruchi Chawla**, Lal Dhar S. Yadav, *Tetrahedron Lett.* **2020**, *61*, 152505. Impact factor: **2.032**, [10.1016/j.tetlet.2020.152505](https://doi.org/10.1016/j.tetlet.2020.152505)
8. Visible-Light-Enabled Aerobic Denitrative C3-Alkenylation of Indoles with β -Nitrostyrenes, **Ruchi Chawla**, Ritu Kapoor, Lal Dhar S. Yadav, *Synlett* **2020**, *31* (14), 1394-1399. Impact factor: **2.170**, DOI: 10.1055/s-0040-1707099
9. Photocatalyst-free visible light driven synthesis of (*E*)-vinyl sulfones from cinnamic acids and arylazo sulfones, **Ruchi Chawla**, Shefali Jaiswal, P.K. Dutta, Lal Dhar S. Yadav, *Tetrahedron Lett.* **2020**, *61*, 151898. Impact factor: **2.032**, <https://doi.org/10.1016/j.tetlet.2020.151898>
10. $K_2S_2O_8$ -mediated decarboxylative oxysulfonylation of cinnamic acids: A transition-metal-free synthesis of β -keto sulfones, **Ruchi Chawla**, Ritu Kapoor, Lal Dhar S. Yadav, *Tetrahedron Lett.* **2019**, *60*, 150964. Impact factor: **2.032**, <https://doi.org/10.1016/j.tetlet.2019.150964>
11. Organic photoredox catalysis enabled cross-coupling of arenediazonium and sulfinate salts: synthesis of (un)symmetrical diaryl/alkyl aryl sulfones, **Ruchi Chawla**, Lal Dhar S. Yadav, *Org. Biomol. Chem.* **2019**, *17*, 4761- 4766. Impact factor: **3.890**, DOI: <https://doi.org/10.1039/C9OB00864K>
12. Visible-light-mediated Gomberg-Bachmann reaction: an efficient photocatalytic approach to 2-aminobiphenyls, Ritu Kapoor, **Ruchi Chawla**, Lal Dhar S. Yadav, *Tetrahedron Lett.* **2019**, *60*, 805-809. Impact factor: **2.032**, <https://doi.org/10.1016/j.tetlet.2019.02.022>

13. Eosin Y catalyzed visible light mediated aerobic photo-oxidative cleavage of the C-C double bond of styrenes, Atul K. Singh, **Ruchi Chawla**, Lal Dhar S. Yadav, *Tetrahedron Lett.* **2015**, *56*, 653-656. Impact factor: **2.032**
14. K₂S₂O₈-mediated aerobic oxysulfonylation of olefins into β-keto sulfones in aqueous media, **Ruchi Chawla**, Atul K. Singh, Lal Dhar S. Yadav, *Eur. J. Org. Chem.* **2014**, *2014*, 2032-2036. Impact factor: **3.261**
15. Aerobic oxysulfonylation of alkenes using thiophenols: an efficient one-pot route to β-ketosulfones, Atul K. Singh, **Ruchi Chawla**, Twinkle Keshari, Vinod K. Yadav, Lal Dhar S. Yadav, *Org. Biomol. Chem.* **2014**, *12*, 8550-8554. Impact factor: **3.890**
16. A direct approach to β-keto sulfones via AgNO₃/K₂S₂O₈ catalyzed aerobic oxysulfonylation of alkenes in aqueous medium, Atul K. Singh, **Ruchi Chawla**, Lal Dhar S. Yadav, *Tetrahedron Lett.* **2014**, *55*, 4742-4746. Impact factor: **2.032**
17. Aerobic oxysulfonylation of alkynes in aqueous media: highly selective access to β-keto sulfones, Atul K. Singh, **Ruchi Chawla**, Lal Dhar S. Yadav, *Tetrahedron Lett.* **2014**, *55*, 2845-2848. Impact factor: **2.032**
18. An organocatalytic synthesis of N-sulfonyl imines using chloramine-T in aqueous medium, **Ruchi Chawla**, Atul K. Singh, Lal Dhar S. Yadav, *Tetrahedron Lett.* **2014**, *55*, 3553-3556. Impact factor: **2.032**
19. Catalyst and metal-free rapid functionalizations of alkynes using TsNBr₂, **Ruchi Chawla**, Atul K. Singh and Lal Dhar S. Yadav, *Synlett* **2013**, *24*, 1558-1562. Impact factor: **2.170**
20. In situ slow release of isocyanates: synthesis and organocatalytic application of N-acylureas, Atul K. Singh, **Ruchi Chawla**, Lal Dhar S. Yadav, *Tetrahedron Lett.* **2013**, *54*, 5099-5102. Impact factor: **2.032**
21. Organocatalysis in synthesis and reactions of epoxides and aziridines, **Ruchi Chawla**, Atul K. Singh, Lal Dhar S. Yadav, *RSC Adv.* **2013**, *3*, 11385-11403. Impact factor: **4.036**
22. Highly regioselective ring-opening of aziridines with arenesulfinates on water: A facile access to beta-amino/vinyl sulfones, **Ruchi Chawla**, Atul K. Singh, Lal Dhar S. Yadav, *Tetrahedron* **2013**, *69*, 1720-1724. Impact factor: **2.388**

23. NHC-catalysed diastereoselective synthesis of multifunctionalised piperidines via cascade reaction of enals with azalactones, Atul K. Singh, **Ruchi Chawla**, Ankita Rai, Lal Dhar S. Yadav, *Chem. Commun.* **2012**, *48*, 3766-3768. Impact factor: **6.065**
24. A one-pot regioselective synthetic route to vinyl sulfones from terminal epoxides in aqueous media, **Ruchi Chawla**, Ritu Kapoor, Atul K. Singh, Lal Dhar S. Yadav, *Green Chem.* **2012**, *14*, 1308-1313. Impact factor: **11.034**
25. Organocatalyzed stereoselective construction of *N*-formylpiperidines via a Michael-aza-Henry-hemiaminalization reaction cascade, **Ruchi Chawla**, Ankita Rai, Atul K. Singh, Lal Dhar S. Yadav, *Tetrahedron Lett.* **2012**, *53*, 5323-5326. Impact factor: **2.032**
26. Organocatalytic asymmetric synthesis of 1,2,4-trisubstituted azetidines by reductive cyclization of aza-Michael adducts of enones, Ritu Kapoor, **Ruchi Chawla**, Santosh Singh, Lal Dhar S. Yadav, *Synlett* **2012**, *23*, 1321-1326. Impact factor: **2.170**
27. Click reaction of epoxides with anthranilic acids using neat grinding to access benzoxazepines, Atul K. Singh, **Ruchi Chawla**, Lal Dhar S. Yadav, *Synthesis* **2012**, *44*, 2353-2358. **Highlighted** in *Synfacts*, **2012**, *8*, 1067 and **Organic Chemistry Portal ID**: J66-Y2012-2440. Impact factor: **2.969**
28. An organocatalyzed highly regioselective one-pot approach to the synthesis of tetrahydrobenzofuranones, **Ruchi Chawla**, Atul K. Singh, Lal Dhar S. Yadav, *Tetrahedron Lett.* **2012**, *53*, 3382-3384. Impact factor: **2.032**

Conferences/Workshops Attended/ Papers Presented

1. Visible-light-mediated solvent-switchable route to stilbenes/vinyl sulfones from β -nitrostyrenes and arylazo sulfones under photocatalyst-free condition
Ruchi Chawla and P. K. Dutta
28th CRSI Symposium in Chemistry held at IIT Guwahati during March 25-27, **2022**
Organized by: IIT, Guwahati and CRSI
Mode of presentation: Poster
2. Radical arylation of vinyl epoxides under visible light mediated photocatalyst-free conditions
Ruchi Chawla and P. K. Dutta

58th Annual Convention of Chemists, 2021 & International Conference on “Recent Trends in Chemical Sciences (RTCS-2021)” organized by the Indian Chemical Society, Kolkata during December 21st – 24th, **2021**

Organized by: Indian Chemical Society, Kolkata

Mode of presentation: Oral

3. Photocatalyst-free visible light mediated denitrative sulfonylation of β -nitrostyrenes using arylazo sulfones

Ruchi Chawla and P. K. Dutta

Celebration of the 160th Birth Anniversary of Acharya Prafulla Chandra Ray, International Seminar on Recent Advances in Chemistry and Material Science (RACMS-2021) during 1st to 8th August **2021**

Organized by: Indian Chemical Society, Kolkata

Mode of presentation: Oral

4. Vinyl epoxide modified chitosan as a synthetic handle for application-based further functionalization

Ruchi Chawla and P. K. Dutta

The 9th Indian Chitin & Chitosan Society Symposium 2021 (9th ICCSS 2021) during 26th to 28th February **2021**

Organized by: Visvesvaraya National Institute of Technology (Nagpur) in collaboration with National Institute of Technology (Agartala) and Indian Chitin & Chitosan Society

Mode of presentation: Oral

5. Photocatalyst-free visible light mediated synthesis of stilbenes from cinnamic acids and arylazo sulfones

Ruchi Chawla and P. K. Dutta

The 57th Annual Convention of Chemists, 2020 & International Conference on “Recent Trends in Chemical Sciences (RTCS-2020)” during December 26 – 29, **2020**.

Organized by: the Indian Chemical Society, Kolkata

Mode of presentation: Oral

6. Participated in the **XX NOST**-Organic Chemistry Conference held at The Ananta, Udaipur, INDIA during December 4-7, **2019** (by invitation)

7. A transition-metal-free oxidative decarboxylative sulfono functionalization of cinnamic acids to β -keto sulfones

Ruchi Chawla, Lal Dhar S. Yadav

25th CRSI Symposium in Chemistry held at IIT Kanpur during July 19-21, 2019

Organized by: IIT, Kanpur and CRSI

Mode of presentation: Poster

8. Synthesis of 2-aminobiphenyls via eosin Y catalyzed Gomberg-Bachmann reaction

Ruchi Chawla, Lal Dhar S. Yadav

7th International Symposium on "Current trends in drug discovery research" held at CSIR-CDRI during February 20-23, 2019

Organized by: **CSIR-CDRI, Lucknow**

Mode of presentation: Poster

9. Visible-light-mediated C(sp²)-H arylation of anilines using eosin Y as an organophotoredox catalyst

Ruchi Chawla, Lal Dhar S. Yadav

National seminar on "**Future India: Science and Technology**", held at the Department of Chemistry, University of Allahabad, Prayagraj during February 22-24, 2019

Organised by: Allahabad Chapter of the **Indian Science Congress Association**

Mode of presentation: Oral

10. Attended *Short Term* Global Initiative of Academic Networks (*GIAN*) *Training Program* on **Nanomedicine with nanoparticle-based diagnostics and therapy** during November 6-10, 2017 at Motilal Nehru National Institute of Technology Allahabad 211004

Organized by: Department of Chemistry, Motilal Nehru National Institute of Technology Allahabad, Prayagraj-211 004

11. Sulfone synthesis using arene sulfinates in aqueous media

Ruchi Chawla, Lal Dhar S. Yadav

XVI Organic Chemistry Conference, held during April 4-7, 2014 at Hotel Jaypee Palace Agra

Organized by: **NOST Council, India**

Mode of presentation: Oral (Invited talk)

12. A facile access to β -amino/vinyl sulfones from aziridines and arene sulfinates in aqueous media

Ruchi Chawla, Atul K. Singh, Lal Dhar S. Yadav

National seminar on "**Innovations in Science and Technology for Inclusive Development**", held at University of Allahabad, March 30-31, 2014

Organised by: Allahabad Chapter of the **Indian Science Congress Association**

Mode of presentation: Oral

13. Rapid functionalizations of alkynes under catalyst- and metal-free conditions

Ruchi Chawla, Lal Dhar S. Yadav

IX J-NOST Conference held at **IISER Bhopal**, Bhopal during December 4-6, 2013

Organised by: **NOST Council, India**

Mode of presentation: Oral

14. A novel enamine-catalyzed synthetic route to the tetrahydrobenzofuran-4-one (tbf) scaffold

Ruchi Chawla, Lal Dhar S. Yadav

National conference on “**Exciting Frontiers of Research in Science and Technology**” held during 28th February-1st March, 2013 at Department of Chemistry, University of Allahabad, Allahabad

Organized by: Allahabad Chapter of the **Indian Science Congress Association**

Mode of presentation: Oral

15. An unprecedented azetination of enals with Chloramine-T-I₂ system on water

Ruchi Chawla, Lal Dhar S. Yadav

8th J-NOST Conference for research scholars from 15-17th December 2012 held at Department of Chemistry, **IIT Guwahati**, Guwahati

Organized by: **NOST Council, India**

Mode of presentation: Poster

16. Organocatalyzed access to benzofuranones via highly regioselective ring opening of epoxides

Ruchi Chawla, Lal Dhar S. Yadav

National conference on “**Chemistry and Life**” held during 16-17th September, 2012

Organized by: **Department of Chemistry, CMP Degree College, Allahabad**

Mode of presentation: Poster

17. A green and facile entry into terminal vinyl sulfones

Ruchi Chawla, Lal Dhar S. Yadav

National conference on “**Chemistry: Role and Challenges**” held during 25-26th February, 2012

Organized by: **Department of Chemistry, Ewing Christian College, Allahabad**

Mode of presentation: Oral

18. The first one-pot synthetic route to vinyl sulfones from terminal epoxides

Ruchi Chawla, Lal Dhar S. Yadav

Proceeding of the Forty Eight Annual Convention of Chemists 2011 and Celebration of the International Year of Chemistry held during 03-07th December, 2011 at Department of Chemistry, University of Allahabad, Allahabad

Organised by: **Indian Chemical Society**

Mode of presentation: Oral

19. An expeditious solvent free synthesis of functionalised thietanes by nucleophile-induced cyclisation of *O,O*-diethyl *S*-(1,3-diaryl-3-oxopropyl) phosphorodithioates

Ruchi Chawla, Ritu Kapoor, Lal Dhar S. Yadav

National seminar on “**Interface of industry, biology and chemistry research in 21st century**” held during 05-07th February, 2011

Organized by: Department of Chemistry, University of Allahabad, Allahabad -211002 in association with Allahabad Chapters of **Indian Science Congress Association** and **Indian Chemical Society**

Indian Chemical Society

Mode of presentation: Oral

Others

1. Fellow of Indian Chemical Society (Life fellow no. 8404)
2. Lifetime membership of Chemical Research Society of India CRSI, India (membership no. LM 2395)
3. Reviewer in *Organic & Biomolecular Chemistry* Journal (RSC).
4. Reviewer in *Environmental Chemistry Letters* Journal (Springer).