Dr. Tavinder Singh

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Male

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https://www.researchgate.net/profile/Singh-38

https://scholar.google.com/citations?user=5Z42zOAAAAAJ&hl=en

LANGUAGES

English

Hindi

SKILLS

- Responsibility
- Team-Work
- Perseverance
- Problem-Solving Ability
- Hard Work

EDUCATIONAL QUALIFICATION

- **Ph.D.** Organic Chemistry
  (2017-2023) (C.P.I 8.4/10)
  Indian Institute of Technology Kanpur, India.
  Thesis Supervisor: Dr. Anand Singh
  Thesis Title: Visible-Light Mediated Functionalization of C=C & C=N Bonds.
- **M.Sc.** (Organic Chemistry)
  (2014-2016)
  Himachal Pradesh University, Shimla.
- **B.Sc.** (Chemistry)
  (2011-2014)
  Himachal Pradesh University, Shimla.
- **Intermediate** (2010)
  Himachal Pradesh Board of School & Education.
  Percentage: 76%
- **High School** (2008)
  Himachal Pradesh Board of School & Education.
  Percentage: 69%

AWARDS & HONOURS

- Qualified National Eligibility Test
- Qualified GATE Examination

RESEARCH INTEREST

- Synthetic Organic Chemistry
- Photoredox Catalysis
- Metal Catalysis

SCIENTIFIC CONTRIBUTION

- Visible-Light Mediated Synthesis of α,β-diamino esters *via* coupling of Dimethyl aniline and glyoxalic oxime ethers.
  Tavinder Singh, Prabhakar Panday, Ganesh Chandra Upreti, Sudhir Ranjan, Raju Kumar Gupta* & Anand Singh*.
  Org. Biomol. Chem., **2022**, *20*, 4522–4525

- Visible-Light Mediated Carbamoylation of *para*-Quinone Methides.
  Tavinder Singh,Ganesh Chandra Upreti, Shivani Arora, Himanshu Chauhan & Anand Singh*.
  J. Org. Chem. **2023**, *88*, 2784−2791

- Photocatalytic Intermolecular Olefin Alkyl Carbofunctionalization Triggered by Haloalkyl Radicals Generated *via* Halogen Atom Transfer.
  Tavinder Singh, Nasireddy Seshadri Reddy, Ganesh Chandra Upreti, Shivani Arora, & Anand Singh*.
  Org. Lett. **2023**, *25*, 5558−5562.

SCIENTIFIC SKILLS

- In-Depth Knowledge of Application of NMR Spectroscopy, including 2D Experiments such as COSY, NOE and DEPT in Solving Structures of Organic Molecules.
- Analytical: IR, UV-Visible, Mass Spectrometry, Fluorescence.
- Convergent with Commonly Used Computer Software: MS-Office, Chem-draw, Sci-Finder, Adobe, Mestrenova, Origin, Endnote etc.
- Expert in designing and execution of multistep reactions (small-step to gram scale reaction.
- Practical Experience of Extraction Methods, various Chromatographic and Crystallisation Techniques.

REFERENCES

- Dr. Anand Singh
  Associate Professor
  Department of Chemistry
  Indian Institute of Technology,
  Kanpur, Kanpur, Uttar Pradesh,
  India 208016
  Contact No. +919695226664
  +92-512-259-6882
  Email-id: anands@iitk.ac.in
- Dr. Dharmaraja Allimuthu
  Assistant Professor
  Department of Chemistry
  Indian Institute of Technology,
  Kanpur, Kanpur, Uttar Pradesh,
  India 208016
  Contact No. +919025480858,
  +92-512-259-2086
  Email-id: atdharma@iitk.ac.in

- Visible-Light Mediated Oxygen Promoted Regioselective Cross Dehydrogenative Coupling of Coumarins and Dimethylanilines
  Tavinder Singh, Ganesh Chandra Upreti, Shivani Arora and Anand Singh*.
  Org. Biomol. Chem., **2023**,*21*, 6671-6674

- Visible-Light Mediated Ring Ablative Functionalization of Oxazoles: Oxidative Azidation and Demethylative Amination
  Parul Garg, **Tavinder Singh** and Anand Singh*.
  Chem. Commun., **2023**, *59*, 9360–9363

- Visible-Light Mediated Halogen Atom Transfer to Access Polyhalogenated and Deuterated Lactams from Alkyl Halides
  Shivani Arora, **Tavinder Singh**, Umasankar Mondal and Anand Singh*
  Eur.J. Org.Chem.2023, e202300469

- Visible-Light Mediated Three-Component Cascade Sulfonylative Annulation.
  Ganesh Chandra Upreti, **Tavinder Singh**, Sudhir Ranjan, Raju Kumar Gupta* and Anand Singh*.
  ACS Omega **2022**, *7*, 29728−29733

- Palladium Catalysed Photochemical Alkylative Functionalization of C=C and C=N Bonds.
  Ganesh Chandra Upreti, **Tavinder Singh**, Kirti Khanna and Anand Singh*.
  J. Org. Chem. **2023**, *88*, 4422−4433.

- Brønsted Acid Promoted C-C Bond Formation Between Indolylmethyl Electrophiles and Ketene Dithioacetals: Diastereoselective Synthesis of Highly Functionalized Cyclopenta[b]indoles.
  Santosh D Jadhav, **Tavinder Singh** and Anand Singh*.
  Tetrahedron Letters 61 (2020) 152349,
  doi.org/10.1016/j.tetlet.2020.152349

- Silver Triflate Catalysed Domino Reactions of O-Alkynylanilines: An Approach Toward Unsymmetrical Diarylacetates and Triarylmethanes.
  Santosh D Jadhav, **Tavinder Singh** and Anand Singh*.
  Asian Journal of Organic Chemistry,
  doi.org/10.1002/ajoc.202200011

NATIONAL CONFERENCES

- Participated and Presented a Poster on “Visible-Light Mediated Synthesis of α, β- Diamino Esters *via* Coupling of Dimethylaniline and Glyoxalic Oxime Esters” in CRSI Conference held at IISER Mohali, India.
- Attended ‘GIAN COURSE’ on Photoredox Catalysis held in NIT Rourkela.

LEADERSHIP/TEACHING EXPERIENCES

- 1 year teaching assistantship in chemistry course and lab for undergraduate students (B.Tech) and M.Sc. at IIT Kanpur.
- Trained several Ph.D. students
- Trained and guided several M.Sc. Students.