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List of publications:

1. **Oxidative Esterification via Cleavage of C(sp²)-N Bond of Imidazo[1,2-a]pyridine: Access to the α -Ketoester and Late-Stage Modification**, Segufa Rahaman, Suhag Singh Sahay, Annu Kumari, and Swapan Dey, **The Journal of Organic Chemistry**, 2025, DOI: 10.1021/acs.joc.5c02391.
2. **A broad perspective on metal complex-based optical recognition of fluoride ions: Twelve years (2014-2025) of innovations and applications**, Kingshuk Debsharma, Sunanda Dey, Swapan Dey, and Chittaranjan Sinha, **Inorganic Chemistry Frontiers**, 2025, (accepted, Review article).
3. **Small molecular N-heteroaromatics-based optical sensing of noxious Hg²⁺ ion: A comprehensive insight into recent advancements, existing challenges, and future perspective** Kingshuk Debsharma, Sunanda Dey, Basudeb Dutta and Swapan Dey* **Analyst**, 2025, **150**, 2725-2775 (Review article)
4. **A Comprehensive Review on the Imidazole, Benzimidazole and Imidazo[1,2-a]pyridine Based Sensors for the Detection of Fluoride Ion**, Annu Kumari, Chandan Kumar Maity and Swapan Dey, **Organic and Biomolecular Chemistry**, 2025, **23**, 2281-2301 (Review article).
5. **Iodine-Assisted Regioselective C3-H Chalcogenation of 4-Phenyl Aminocoumarin: Access to Unusual Dual Selenylation of N-Substituted Derivatives**, Suhag Singh Sahay, Segufa Rahaman, Rwishanya Das, Swapan Dey, **European Journal of Organic Chemistry**, 2025, **28**, e202401163
6. **Multicomponent Cross-Dehydrogenative Coupling of Imidazo[1,2-a]pyridine: Access to Abnormal Mannich and Mannich-Type Reaction**, Segufa Rahaman, Suhag Singh Sahay, Annu Kumari, and Swapan Dey, **The Journal of Organic Chemistry**, 2024, **89**, 10773-10784.

7. **White light-emissive triphenylamine-based triazole derivatives: Fluorescence switching response to volatile acid**, Annu Kumari, Segufa Rahaman, **Swapan Dey**, [Journal of Luminescence](#), 2024, 275, 120774.
8. **A novel class of highly flexible transparent boranil/polydimethylsiloxane composites for white light emission**, Annu Kumari. Sukhendu Nandi, **Swapan Dey**. [Journal of Luminescence](#), 2023, 253, Journal of Luminescence, 253, 2023, 119466.
9. **Polynaphthalene-Based Oxazaborinine Complexes Formulated as Red Light Emitters and High-Performance Asymmetric Supercapacitors**, Annu Kumari, Chandan K. Maity, G. C. Nayak, and **Swapan Dey** [Langmuir](#), 2023, 39, 8450-8462.
10. **Imidazopyridine-fluoride interaction: Solvent-switched AIE effects via S...O conformational locking**, Annu Kumari, Wim Dehaen, Deepak Chopra and **Swapan Dey**, [New Journal of Chemistry](#), 2022, 46, 10628-10636.
11. **D-Mannitol based surfactants for cosmetic and food applications and hydrogels to produce stabilized Ag nanoparticles**, Santosh Kumar Singh, **Swapan Dey**, Manfred P. Schneider and Sukhendu Nandi, [New Journal of Chemistry](#), 2022, 46, 6193-6200.
12. **Strategy to Design a Flexible and Macromolecular Sensor to Bind Cd²⁺ Ions: A Complete Photophysical Analysis and Bio-Imaging Study**, Surajit Mondal and **Swapan Dey**, [ACS OMEGA](#), 2021, 6, 42, 27936–27945.
13. **Tandem Nenitzescu Reaction/Nucleophilic Aromatic Substitution to Form Novel Pyrido Fused Indole Frameworks**, Rashmi Singh, Harshita Bhatia, Dr. Prabhat Prakash, Dr. Elke Debroye, **Dr. Swapan Dey**, Prof. Wim Dehaen, [European Journal of Organic Chemistry](#), 2021, 2021, 4865-4875.
14. **Dicyanamide-intertwined assembly of two new Zn complexes based on N2O4-type pro-ligand: Synthesis, crystal networks, spectroscopic insights, and selective nitroaromatic turn-off fluorescence sensing**, Dhruba jyoti Majumdar, **Swapan Dey**, Annu Kumari, Tapan KumarPal, Kalipada Bankura, and Dipankar Mishra, [Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy](#), 2021, 254, 119612.

15. Application of the Meerwein reaction of 1,4-benzoquinone to a metal-free synthesis of benzofuropyridine analogues, Rashmi Singh, Tomas Horsten, Rashmi Prakash, Swapan Dey and Wim Dehaen, *Beilstein Journal of Organic Chemistry*, 2021, 17, 977–982.
16. Unusual absence of FRET in triazole bridged coumarin–hydroxyquinoline, an active sensor for Hg^{2+} detection, Surajit Mondal, Niladri Patra, Hari Pada Nayek, Sumit K. Hira, Soumit Chatterjee, Swapan Dey, *Photochem. Photobiol. Sci.*, 2020, 19, 1211-1221.
17. Template-Assisted Regioselective Identification of Metal Ions on Coumarin-Furan Conjugated Chemosensors: AIEE Effect and Photo-Switching pH Indicator by ICT, Ashish Kumar, Sumit Kumar Hira, Swapan Dey, *Eur. J. Inorg. Chem.* 2020, 3771-3777.
18. Novel Class of Isoxazole-Based Gelators for the Separation of Bisphenol A from Water and Cleanup of Oil Spills, Santosh Kumar Singh, Priyanka Saha, Swapan Dey, and Sukhendu Nandi, *ACS Omega* 2020, 5, 15, 8613-8618.
19. Dual core clickate fluorophores for selective recognition of Cu^{2+} and Ni^{2+} along with live cell imaging, Surajit Mondal, Chanda Kumari, Sumit K. Hira and Swapan Dey, *Inorganica Chimica Acta*, 2020, 509, 1196552.
20. Photo-physical aspects of BODIPY-coumarin conjugated sensor and detection of Al^{3+} in MCF-7 cell, Kumari Somlata Kashyap, Sumit Kumar Hira and Swapan Dey, *Supramolecular Chemistry*, 2019, 31, 695-702.
21. Recognition of Al^{3+} through the off-on mechanism as a proficient driving force for the hydrolysis of BODIPY conjugated Schiff base and its application in bio-imaging, Kumari Somlata Kashyap Ashish Kumar, Sumit Kumar Hira, Swapan Dey, *Inorganica Chimica Acta*, 2019, 498, 1191572.
22. Detection of Hg^{2+} ion using highly selective fluorescent chemosensor in real water sample and in-vitro cell study upon breast adenocarcinoma (MCF-7), Ashish Kumar, Sumit Kumar Hira, Partha Pratim Manna, and Swapan Dey*, *Supramolecular Chemistry*, 2019, 31, 382-390.
23. “Epoxy-based polymer incorporating 1-Naphthylamine and sebacic acid moieties: A selective fluorescent sensor for ferric ions” Samaresh Ghosh,

Rajkumar Manna, and Swapan Dey, *Journal of Molecular Structure*, 2019, 1180, 406-410.

24. *Syntheses, crystal structures and photo physical aspects of azido-bridged tetranuclear cadmium (II) complexes: DFT/TD-DFT, thermal, antibacterial and anti-biofilm properties*, Dhrubajyoti Majumdar, Swapan Dey*, S. S. Sreejith, Jayanta Kumar Biswas, Monojit Mondal, Pooja Shukla, Sourav Das, Tapan Pal, Dhiraj Das, Kalipada Bankura, Dipankar Mishra*, *Journal of Molecular Structure*, 2019, 1179, 694-708.
25. *Nitrato, Pseudohalo-Linked Zn(II)/Cd(II) Schiff-Base Complexes with 1,3-Diimine Spacer Group: Syntheses, Crystal Structures, DFT, TD-DFT and Fluorescence Studies*, Dhrubajyoti Majumdar, Swapan Dey, Sreejith S. Sreekumar, Sourav Das, Dhiraj Das, Ramesh K. Metre, Kalipada Bankura, Dipankar Mishra, *ChemistrySelect*, 2018, 3, 12371-12382.
26. *Water switched aggregation/disaggregation strategies of a coumarin-naphthalene conjugated sensor and its selectivity on Cu²⁺ and Ag⁺ ions along with cell imaging study on human osteosarcoma cells (U-2 OS)*, Ashish Kumar, Surajit Mondal, Kumari Somlata Kayshap, Sumit Kumar Hira, Partha Pratim Manna, Wim Dehaen and Swapan Dey*, *New Journal of Chemistry*, 2018, 42, 10983 - 10988.
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28. *Polyurethane network using 1-Naphthylamine embedded epoxy-based polymer: Ferric ion selective Fluorescent probe*" Samareesh Ghosh, Rajkumar Manna and Swapan Dey, *Polymer Bulletin* 2018, 1-9.
29. *Highly selective and safe 'in vitro' detection of biologically important 'Uric acid' in living cells by a new fluorescent 'turn-on' probe along with quantum chemical*

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 31. *A Non-Perilous Coumarin-Based Ratiometric Probe for 'In Vitro' Detection of Cu through Cell Imaging Technique*, Chanda Kumari, Dibyendu Sain, Ashish Kumar, Hari Pada Nayek, Sushanta Debnath, Partha Saha and Swapan Dey* [*ChemistrySelect*](#), 2017, 2, 8270–8277.
 32. *"Synthesis of Rhodamine-Based Chemosensor for Fe³⁺ Selective Detection with off-on Mechanism and its Biological Application in DL-tumor cells"* Ashish Kumar, Dibyendu Sain, Chanda Kumari and Swapan Dey* [*ChemistrySelect*](#) 2017, 2, 2969-2974.
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 35. *'A bis-hydrazone derivative of 2,5-furandicarboxaldehyde with perfect hetero-atomic cavity for selective sensing of Hg(II) and its intracellular detection in living HeLa S3 cell'* Chanda Kumari, Dibyendu Sain, Ashish Kumar, Hari Pada Nayek, Sushanta Debnath, Partha Saha and Swapan Dey* [*Sensors and Actuators B*](#) 243 (2017) 1181–1190.
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37. *'Lead ion induced chemodosimeter approach of a tripodal hydroxyl-quinoline based phospho-ester through P-O bond cleavage'* Dibyendu Sain, Chanda Kumari, Ashish Kumar, Hari Pada Nayek and Swapan Dey* [**Dalton Trans.**](#), 2016, 45, 9187 – 9192.
38. *"Indole based distinctive chemosensors for 'naked eye' detection of CN⁻ and HSO₄⁻, associated with hydrogen bonded complex and their DFT study'* Dibyendu Sain, Chanda Kumari, Ashish Kumar and Swapan Dey* [**Supramolecular Chemistry**](#), 2015, 28, 239-48.
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44. *'Naphthyridine Based Fluorescent Receptors for the Recognition of Uric Acid'* Swapan Dey*, Dibyendu Sain and Shyamaprosad Goswami [**RSC Adv.**](#), 2014, 4, 428-433.
45. *'Recognition of a dicarboxylic acid with dipicolyl urea in solution and in solid phases: intramolecular hydrogen bond inhibiting both pyridine nitrogens from*

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48. *'Tailor-made Naphthyridines: Self-Assembling Multiple Hydrogen-Bonded Supramolecular Architectures from Dimer to Helix'* Shyamaprosad Goswami*, **Swapan Dey**, John F. Gallagher, Alan J. Lough, Santiago Garcí'a-Granda, Laura Torre-Ferna'ndez, Ibon Alkorta, Jose' Elguero, **Journal of Molecular Structure**, 2007, 846, 97-107.
49. *'Microwave-expedited one-pot, two-component solvent-free synthesis of functionalised pyrimidines'* Shyamaprosad Goswami*, Subrata Jana, **Swapan Dey** and Avijit Kumar Adak, **Australian Journal of Chemistry**, 2007, 60, 120-123.
50. *'Directed Molecular Recognition: Design and Synthesis of Neutral Receptors for Biotin to bind both its functional groups'* Shyamaprosad Goswami* and **Swapan Dey**, **Journal of Organic Chemistry**, 2006, 71, 7280-7287.
51. *'Recognition of Dicarboxylic Acid by 6,6/-Dipivaloylamino- 3,3/-bipyridine and the Supramolecular Solid State Locking of the Carboxyls in the anti-Form'* Shyamaprosad Goswami*, Subrata Jana, **Swapan Dey**, Ibrahim Abdul Razak, Hoong-Kun Fun. **Supramolecular Chemistry**, 2006, 18, 571-576.
52. *'2-Amino-6-hydroxymethylpyridine'* Shyamaprosad Goswami, **Swapan Dey**, Suchada Chantrapromma, Hoong-Kun Fun; **Acta Crystallographica**, 2006, E62, o3225-o3227.
53. *'Dynamic molecular recognition in the generation of a new crystal engineering motif: a unique case study of a dicarboxylic acid with a ditopic receptor*

- favouring a polymeric over a dimeric hydrogen bonded supramolecular complex'* Shyamaprosad Goswami, **Swapan Dey**, Hoong-Kun Fun, Shazia Anjum and Atta-ur-Rahman, [Tetrahedron Letters](#), 2005, 46, 7187-7191.
54. *'Directed H-bonding inhibition in molecular recognition: A NMR case study of the H-bonding of a dicarboxylic acid with a new mixed diamide receptor having one adjacent pyridine-N-oxide'* Shyamaprosad Goswami, **Swapan Dey**, Annada C. Maity and Subrata Jana, [Tetrahedron Letters](#), 2005, 46, 1315-1318.
55. *'A Convenient Palladium Catalyzed Synthesis of Symmetric Biaryls, Biheterocycles and Biaryl Chiral Diamides'* Shyamaprosad Goswami, Avijit Kumar Adak, Reshmi Mukherjee, Subrata Jana, **Swapan Dey**, and John F. Gallagher, [Tetrahedron](#), 2005, 61, 4289-4295.
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57. *'A Simple and Convenient Manganese Dioxide Oxidation of Benzyl Halides to Aromatic Aldehydes under Neutral Condition'* Shyamaprosad Goswami, Subrata Jana, **Swapan Dey**, and Avijit Kumar Adak [Chemistry Letters](#), 2005, 34,194-195.
58. *'Side chain bromination of mono and dimethyl heteroaromatic and aromatic compounds by solid phase N-bromosuccinimide reaction without radical initiator under microwave'* Shyamaprosad Goswami, **Swapan Dey**, Subrata Jana, and Avijit Kumar Adak [Chemistry Letters](#), 2004, 33, 916-918.
59. *'Multiple hydrogen bonds and tautomerism in naphthyridine derivatives'* Carmen Alvarez-Rua, Santiago García-Granda, Shyamaprosad Goswami, Reshmi Mukherjee, **Swapan Dey**, Rosa M. Claramunt, M. Dolores Santa María, Isabel Rozas, Nadine Jagerovic, Ibon Alkorta, and José Elguero, [New Journal of Chemistry](#), 2004, 28, 700-707.

Invited Lectures/Guest Lectures/ technical talks:

- ❖ Technical talk on “Molecular Recognition for the complexation of the ions with designed sensors” in the international conference on “Application of Supramolecular Chemistry in Water treatment” held on 4-5th February 2019 at Tata Steel, Jamshedpur.
- ❖ “International Symposium on “Supramolecular Chemistry and Materials” held on 21-22 May 2015 in the **Department of Chemistry, KU Leuven, Belgium**: Title: “Molecular Recognition: The techniques for complexation of the substrates with designed receptors”
- ❖ Indole based Fluorogenic chemosensor for visual detection of HSO_4^- and CN^- ions **CTriC-2014, CUSAT, 17th-18th January 2014**.
- ❖ Dicarboxylic Acids: Good Supramolecular Synthons for Crystal Engineering, **46th Annual Convention of Chemists 2009 and International Conference on Recent Research Trends in Chemical Sciences by Indian Chemical Society** held on 2nd -6th December **2009** at VIT, Vellore, Tamilnadu, India.
- ❖ Appliance of Molecular Recognition: Urea-Uric Acid-Biotin-Creatinine: **45th Annual Convention of Chemists 2008** and by Indian Chemical Society held on 23rd to 27th November, 2008 at Dharwad, Karnatak University, India.

Work shop attended:

- i. “**Introduction to Gaussian: Theory and Practice**”, New Delhi, India, January 6th-10th 2014 organised by Gaussian and Scube India Pvt. Ltd. New Delhi.
- ii. “National workshop on **Green Chemistry** organized by Department of Chemistry, S. G. B. Amravati University, Amravati, Maharastra from February 17th – 18th, 2010.

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