

PATENTS

_____ Filed

- (3) S. Debnath and S. Maity "A novel alkylaminating agent, a process for the preparation thereof and the application thereof in the synthesis of spiro γ -lactams." IPAN-202531092913, Application Date: September 27, 2025.
- (2) P. P. Mondal and S. Maity "A novel bifunctional Formyl-amination equivalent reagent, a process for the preparation thereof and the application thereof in the synthesis of 1,2-iminoacetals/ β -amino aldehyde." IPAN-202531058584, Application Date: June 18, 2025.

_____ Granted

- (1) S. Maity and S. Samanta "A novel bifunctional phosphoaminating agent, a process for the preparation thereof and the application thereof in the synthesis of aminophosphonates/aminophosphonic acids." Ind. Pat. No-**576964**, Date of grant: December 31, 2025.

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- (43) S. Debnath, M. Ray and S. Maity.* "Photochemical Switchable Access to Spiro- γ -lactams and Spiro- γ -lactones from Olefins via N to O Atom Swap." - **Org. Lett.** **2026**, 28, xxx-xxx.
- (42) A. Kr Das, R. Lo and S. Maity.* "Unified Photoredox Strategy for Selective Access to Hydroisoquinoline and Benzosultam via Tether Modulation of Allylamine." **Org. Lett.** **2026**, 28, 617–622.
- (41) B. Saha, A. Das, A. S. Patra, A. K. Mukherjee, A. Mishra,...S. Pramanik and S. Maity and S. Maity.* "DFT-guided development of polar collector to enhance oxidized coal flotation." **Int. J. Coal Prep. Util.** **2026**, 46, xxx-xxx (<https://doi.org/10.1080/19392699.2025.2609724>).
- (40) S. Roy Chowdhury,[§] D. Singh,[§] A. Samanta and S. Maity.* "[3+2] Annulation of Donor-Acceptor Cyclopropanes with Ammonium Thiocyanates: Interrupted Cascade Leads to Elusive Iminodihydrothiophene Derivatives." **J. Org. Chem.** **2025**, 90, 15302–15312. ([§]Equal Contributions)
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- (39) S. Mondal,[§] S. Debnath,[§] R. Lo and S. Maity.* "Photoredox Activation of Donor-Acceptor Cyclopropanes: Distonic Radical Cation Reactivity in [3+2] Cycloaddition Reactions." **Angew. Chem., Int. Ed.** **2025**, 64, e202419426. ([§]Equal Contributions)
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- (38) S. Debnath, and S. Maity.* "Distonic Radical Cations in Visible Light-Driven Cycloadditions." **ChemPhotoChem** **2025**, 9, e202500249.
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- (37) A. Samanta, S. Debnath, P. Roy and S. Maity.* "Viewing the Ritter Reaction through Single Electron Transfer

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- (36) P.P. Mondal, S. Maity, S. Debnath and S. Maity.* "Photosensitized Energy Transfer-Mediated Aminoformylation of Alkenes." **Org. Lett.** **2025**, *27*, 7986–7990.
- (35) S. Pramanik, I. Ul Hoque and S. Maity.* "Homologation of Alkyl Thiocyanates through Photochemical Group Transfer Radical Addition (GTRA)." **Chem. Commun.** **2025**, *61*, 11862–11865.
- (34) A. Mukherjee, A. Samanta and S. Maity.* "Photo-Thiocyanoamination of π - and σ -Bonds: Reagent Development and Synthetic Applications." **J. Org. Chem.** **2025**, *90*, 7008–7017.
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- (33) S. Mondal, S. Pramanik and S. Maity.* "Thiocyanate: A Visible-Light-Driven Traceless Auxiliary for Stereoselective Cyclopropyl Ketone Construction." **Chem. Commun.** **2025**, *61*, 7999–8002.
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- (32) A. Samanta, S. Debnath, S. Maity and S. Maity.* "Photochemical Homologated Aminophosphorylation of Carbon-Carbon π -, and σ -Bonds through Radical Translocation." **Chem. Eur. J.** **2025**, *31*, e202500886.
- (31) P.P. Mondal, M. Ray and S. Maity.* "Photochemical Alkylamination of Olefins through Reactivity-Based Sorting of Alkyl Radicals." **Org. Lett.** **2025**, *27*, 2412–2417.
- (30) A. Samanta, P.P. Mondal, G. Bej and S. Maity.* "Development of a Phototriggered Diradical Phosphoamination Strategy of Alkenes." **Org. Lett.** **2025**, *27*, 606–611.
- (29) G. Chakraborty and S. Maity.* "Divergent Hydroelementation of Unsaturated C-C Bonds Using 3d Transition Metal Based Catalysts." **Adv. Synth. Catal.** **2025**, *367*, e202401239.
- (28) I. Ul Hoque, A. Samanta, S. Pramanik, S. R. Chowdhury, R. Lo and S. Maity.* "Photocascade chemoselective controlling of ambident thio(seleno)cyanates with alkenes via catalyst modulation." **Nat. Commun.** **2024**, *15*, 5739.
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- (26) S. Pramanik, A. K. Das, S. Debnath and S. Maity.* "Introducing Alkyl Selenocyanates as Bifunctional Reagents in Photoredox Catalysis: Divergent Access to Ambident Isomers of -SeCN." **Org. Lett.** **2024**, *26*, 8447–8452.
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- (25) S. Pramanik, A. Samanta and S. Maity.* "A Two Carbon Homologation of Friedel-Crafts Alkylation Enabled by Photochemical Alkene Stitching: Modular Assembly of Cyclolignans." **Chem. Commun.** **2024**, *60*, 5282–5285.
- (24) Rounds, H. R.; Zeller, M.; Uyeda, C.* "Molecular Level Structure Development of Indian Coal using Experimental and AI-DFT Techniques" **J. Mol. Struct.** **2024**, *1301*, 137346.
- (23) A. Samanta, S. Debnath, P. P. Mondal and S. Maity.* "Visible Light Induced Difunctional Hetero-annulation of Unsaturated C-C Bonds." **Adv. Synth. Catal.** **2023**, *365*, 3182–3210.
- (22) S. Pramanik, P. P. Mondal and S. Maity.* "Organophotoredox-Catalyzed Selective Mono- and Bis- C-H Alkylation

of Electron-Rich (Hetero)Arenes." *J. Org. Chem.* **2023**, *88*, 15256–15269.

- (21) S. Mondal, N. Chatterjee and S. Maity.* "Recent Developments on Photochemical Synthesis of 1,n-Dicarbonyls." *Chem. Eur. J.* **2023**, *29*, e202301147.
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- (20) D. Singh, S. Pramanik and S. Maity.* "Photocatalytic Sequential C-H Functionalization Expediting Acetoxymalonylation of Imidazo-Heterocycles" *Beilstein J. Org. Chem.* **2023**, *19*, 666–673.
[Invited contribution to a themed issue "C–H bond functionalization: recent discoveries and future directions"]
- (19) A. Samanta, S. Pramanik, S. Mondal and S. Maity.* "ZincAcetate-Promoted Blocking of ATRA Process with Alkyl Halides Enabling Photochemical Alkylamination of Olefins." *Chem. Commun.* **2022**, *58*, 8400–8403.
- (18) D. Singh, S. Roy Chowdhury, S. Pramanik, and S. Maity.* "Molecular Iodine Enabled Generation of Iminyl Radicals from Oximes: A Facile Route to Imidazo[1,2-*a*]pyridines and its Regioselective C-3 Sulfenylated Products from Simple Pyridines." *Tetrahedron* **2021**, *88*, 132125.
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- (15) S. Roy Chowdhury, I. Ul Hoque, and S. Maity.* "TBAI/TBHP-Promoted Generation of Malonyl Radicals: Oxidative Coupling with Styrenes Leads to γ -Keto Diesters." *Chem. Asian. J.* **2018**, *13*, 2824–2828.
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- (13) S. Roy Chowdhury, P. Fadikar, I. Ul Hoque, and S. Maity.* "Cross dehydrogenative coupling (CDC) of aldehydes with *N*-hydroxyimides by visible light photoredox catalysis." *RSC. Adv.* **2015**, *7*, 44928–44932.

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- (5) S. Ghosh,* Md. F. Hossain, C. K. Malik and S. Maity "Effect of ring fusion stereochemistry on double bond geometry. Unexpected formation of nine- membered cyclic ether with *E*-configured double bond through RCM." **Tetrahedron** **2010**, 66, 9159–9164.
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