

The research work under reference has not been given any award. The applicant is the main corresponding author of these publications.

Review articles:

- 1) "Bioorthogonal Chemistry in Translational Research: Advances and Opportunities," R. Chaudhuri, S. Bhattacharya, **J. Dash***, *ChemBioChem*, **2023**, 24, e20230047
- 2) "Nucleic Acids as Templates and Catalysts in Chemical Reactions: Target-guided Dynamic Combinatorial Chemistry and In situ Click Chemistry and DNA/RNA Induced Enantioselective Reactions," P. Saha, D. Panda, **J. Dash***, *Chem. Soc. Rev.*, **2023**, 52, 4248-4291.
- 3) "Ring closing metathesis for the construction of carbazole and indole-fused natural products," T.Mandal, **J. Dash***, *Org. Biomol. Chem.*, **2021**, 19, 9797-9808.
- 4) "Binding Insights into Quadruplex Selective Carbazole Ligands" D Müller, P Saha, D. Panda, **J. Dash.*** H Schwalbe*, *Chem. Eur. J.*, **2021**, 27, 12726-12736.
- 5) S. Bhattacharya, **J. Dash.*** Nucleic acid secondary structures for therapeutic and biomolecular device applications." *Chem. Soc. Report.*, **2021**.
- 6) "Regulation of gene expression by targeting DNA secondary structures." R Chaudhuri, K Fatma, **J. Dash.*** *J. Chem. Sci.* **2021**, 133, 1-17.
- 7) "Recent Update on Targeting c-MYC G-Quadruplexes by Small Molecules for Anticancer Therapeutics" R. Chaudhuri, S. Bhattacharya, **J. Dash.*** S. Bhattacharya*, *J. Med. Chem.* **2021**, 64, 42–70. (perspective).

Book Chapters

- 8) "Click and combinatorial approaches to quadruplex ligand discovery." **J. Dash**, P. Saha, K. Fatma. *Quadruplex Nucleic Acids as Targets for Medicinal Chemistry*" Book Chapter, (2020): 287.

Publications

- 9) "Self-assembled lipophilic guanosine derivatives modulate membrane transport across lipid bilayer," Y.P. Kumar, M. Debnath, T. Das, R. Paul, **J. Dash***, *Cell Rep. Phys. Sci.*, **2024** (under revision)
- 10) "Template-Directed in Situ Synthesis of an RNA Quadruplex-Binding Small Molecule to Regulate Nsp10 expression in SARS-CoV-2 Genome", R. Paul, D. Dutta, T. Bhattacharyya, R. Paul, **J. Dash***, *ACS Chem. Biol.* **2024** (under revision)
- 11) "Synthesis of triazole fused tetracyclic spirooxindole derivatives via metal-free Huisgen cycloaddition," S. Maiti, N. Parui, J. Halder, **J. Dash***, *ChemComm*, **2024**, (accepted).
- 12) "Synthesis of Phenanthrenes and 1-Hydroxyphenanthrenes via Aromatization-Assisted Ring-

Closing Metathesis: Towards Polynuclear Aromatic Hydrocarbons,” C. P. Roy, S. Karmakar, **J. Dash***, *J. Org. Chem.*, **2024**, 89, 15, 10511–10523.

13) “Transition-Metal Catalyzed Rapid Synthesis of Imidazo[2,1-b] thiazoles: Access to Aza-Fused Heterocycles via Aerobic Oxidative Coupling of 2-Aminothiazoles and Acetophenones,” S. Basak, P. Paul, **J. Dash***, *Synthesis*, **2024**, DOI: 10.1055/a-2369-3893.

14) “A non-B DNA binding peptidomimetic channel alters cellular functions,” R. Paul, D. Dutta, T. K. Mukhopadhyay, D. Müller, B. Lala, A. Datta, H. Schwalbe, **J. Dash***, *Nat. Commun.*, **2024**, 15, 5275.

15) “Efficient Synthesis of Cyclohepta[b]indoles and Cyclohepta[b]indole-Indoline Conjugates via RCM, Hydrogenation, and Acid-Catalyzed Ring Expansion: A Biomimetic Approach,” N. Parui, T. Mandal, S. Maiti, **J. Dash***, *Chem. Eur. J.*, **2024**, 30, e202401059.

16) “Combating Multidrug-Resistance in *S. pneumoniae*: A G-quadruplex Binding Inhibitor of Efflux Pump and its Bio-Orthogonal Assembly,” R. Chaudhuri, P. Thumapati, D. Biswas, S. Mandal, **J. Dash***, *NAR Mol. Med.*, **2024**, 1, ugae005.

17) “Guanosine-Based Hydrogel as a Supramolecular Scaffold for Template-Assisted Macrocyclization,” B. Lala, R. Chaudhuri, T. Prasanth, I. Burkhart, H. Schwalbe, **J. Dash***, *ChemComm*, **2024**, 60, 3433-3436.

18) “pH-Dependent Complex Formation with TAR RNA and DNA: Application Towards Logic Gates,” R. Paul, R. Paul, D. Dutta, **J. Dash***, *Analyst*, **2024**, 149, 1976-1980.

19) “Selective Recognition of c-KIT 1 G-quadruplex by Structural Tuning of Heteroaromatic Scaffolds and Side Chains,” K. Fatma, P. Thumapati, D. Panda, V. Ravichandiran, **J. Dash***, *ACS Med. Chem. Lett.*, **2024**, 15, 388–395.

20) “Total Synthesis of Racemic Benzomalvin E, a Quinazolinone Isolated from *Penicillium* sp. FN070315 and Exploration to the Direct Synthesis of (E)-Benzomalvin B,” S. Basak, **J. Dash***, *J. Org. Chem.*, **2024**, 89, 3612-3617.

21) “Potassium tert-Butoxide Mediated Cascade Synthesis of Rutaecarpine Alkaloid Analogs: Access to Molecular Complexity on Multigram Scales,” S. Basak, **J. Dash***, *J. Org. Chem.*, **2024**, 89, 233–244.

22) “KOtBu-Mediated Regioselective Hydroxymethylation of Thiazoles and Benzothiazoles: Synthesis of Biologically Active Heteroaromatic Compounds,” S. Karmakar, D. Yadav, **J. Dash***, *Asian J. Org. Chem.* 2023, 12, e2023003.

23) “Nucleoside Derived Metallo-hydrogel Induces Cell Death in *Leishmania* Parasites”, S. Bhattacharya, T. Bhattacharyya, S. Khanra, R. Banerjee, Rahul; **J. Dash***, *ACS Infect. Dis.*, **2023**, 9, 1676–1684.

24) “Bisindole Enyne as a New Pharmacophore with Anticancer Properties,” G. C. Midya, S. Mandal, **J. Dash***, *J. Indian Chem. Soc.*, **2023**, 100, 101028 (invited article).

- 25) "Rapid Access to Substituted Indenones via Grignard Reaction and its Application in the Synthesis of Fluorenones using Ring Closing Metathesis" N. Parui, T. Mandal, **J. Dash***, *Eur. J. Org. Chem.*, **2023**, 26, e202201285.
- 26) "Expanding the Toolbox of Target Directed Bio-Orthogonal Synthesis: In Situ Direct Macrocyclization by DNA Templates" R. Chaudhuri, P. Thumpati, **J. Dash***, *Angew. Chem. Int. Ed.* **2022**, 62, e202215245.
- 27) "Diastereoselective Reversible C-C Bond Exchange of Oxindole-Thiazolidinediones for Dynamic Combinatorial Chemistry" A. Gorai, G. Chakraborti, S. Basak, **J. Dash***, *Org. Biomol. Chem.*, **2022**, 20, 9307-9312.
- 28) "Thiazole Containing PNA Mimic Regulates c-MYC Gene Expression through DNA G-quadruplex" A. Gorai, R. Chaudhuri, T. K. Mukhopadhyay, A. Datta, **J. Dash***, *Bioconjugate Chem.* **2022**, 33, 6, 1145–1155.
- 29) "Cycloaddition of N-sulfonyl and N-sulfamoyl azides with alkynes in aqueous media for the selective synthesis of 1,2,3-triazoles," P. Thumpati, G. Chakraborti, T. Mandal, V. Ravichandiran, **J. Dash***, *Green Chem.*, **2022**, 24, 911-915.
- 30) "Triazolyl Dibenzo[a,c]phenazines Stabilize Telomeric G-quadruplex and Inhibit Telomerase", S. Pal, K. Fatma, V. Ravichandiran, **J. Dash***, *Asian J. Org. Chem.* **2021**, 10, 2921-2926.
- 31) "Supramolecular Template-Directed In Situ Click Chemistry: A Bioinspired Approach to Synthesize G-Quadruplex DNA Ligands." T. Bhattacharyya, D. Panda, **J. Dash***, *Org. Lett.* **2021**, 23, 3004–3009.
- 32) "Studies Directed towards the Synthesis of Acridone Family of Natural Products: Total Synthesis of Acronycines and Atalaphyllidines" T. Mandal, S. Karmakar, A. Kapat, **J. Dash***, *ACS Omega*, **2021**, 6, 27062-27069.
- 33) "Potassium tert-Butoxide Promoted Synthesis of Dihydroquinazolinones", T. Ghosh, I. MANDAL, S. Basak, **J. Dash***, *J. Org. Chem.* **2021**, 86, 14695-14704.
- 34) "A [3+2] Cycloaddition-1,2-Acyl Migration-Hydrolysis Cascade for Regioselective Synthesis of 1,2,3-Triazoles in Water," G. Chakraborti, T. Mandal, C. P. Roy, **J. Dash***, *ChemComm.*, **2021**, 57, 7970-7973.
- 35) "Prolinamide plays a key role in promoting copper-catalyzed cycloaddition of azides and alkynes in aqueous media via unprecedented metallacycle intermediates." Gargi, R. Jana, T. Mandal, A. Datta, **J. Dash***, *Org. Chem. Frontiers* **2021**, 8, 2434-2441.
- 36) "A DNA nanosensor for monitoring ligand-induced i-motif formation." P. Saha, D. Panda, R. Paul, and **J. Dash***, *Org. & Biomol. Chem.* **2021**, 9, 1965-1969.
- 37) "Site-Selective Aerobic C–H Monoacylation of Carbazoles Using Palladium Catalysis." S.

Maiti, T. Mandal, B. P. Dash, **J. Dash***, *J. Org. Chem.* **2021**, 86, 1396–1407.

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39) "Target Directed Azide-Alkyne Cycloaddition for Assembling HIV-1 TAR RNA Binding Ligands" R. Paul, D. Dutta, R. Paul, **J. Dash***, *Angew. Chem. Int. Ed.* **2020**, 132, 12507-12511.

40) "Reductive aromatization of oxindoles to 3-substituted indoles," T. Mandal, G. Chakraborti, **J. Dash***, *Tetrahedron Letters*, **2020**, 61, 152109.

41) "In situ Formation of Transcriptional Modulators using Non-canonical DNA i-Motifs" P. Saha, D. Panda, D. Müller, A. Maity, H. Schwalbe, **J. Dash***, *Chemical Science* **2020**, 11, 2058-2067.

42) "Ionophore constructed from non-covalent assembly of a G-quadruplex and liponucleoside transports K⁺-ion across biological membranes" M. Debnath, S. Chakraborty, Y. P. Kumar, R. Chaudhuri, B. Jana, **J. Dash***, *Nature Communications*, **2020**, 11, Article number: 469.



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