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Publications

- *"Total Synthesis of the Repeating Unit of the O-antigen from Proteus mirabilis OC (CCUG 10702) Serogroup O75: Step-wise and One-pot Approaches"* Sunil K. Yadav, **Somnath Yadav*** **European Journal of Organic Chemistry (Accepted Article)**, **2024,** Article no. e202400718. **DOI: 10.1002/ejoc.202400718**

- *"A sugar-derived ligand for room temperature aerial oxidation or non-aqueous Markovnikov hydration of styrenes using a preformed or in situ generated Co complex"* Sachchida Nand Pandey, Arunava Sengupta, Rajib Bera, Sohel Ali and **Somnath Yadav*** ***Catalysis Science & Technology*****, 2024**. **DOI: 10.1039/D4CY00522H**

- *"Understanding the gelation properties of fluorophenyl glycosides of arabinoside gelators: Experimental and theoretical studies"* S. N. Pandey, N. P. Pathak, Arunava Sengupta* and **Somnath Yadav*** **Soft Matter, 2024, DOI: 10.1039/D4SM00521J**

- *"Acetoxy group directed regioselective C2-alkenylation of indoles via Pd-Ag bimetallic catalysis"* Aditya Paul, Arunava Sengupta, Bijan Sarkar and **Somnath Yadav*** ***J. Org. Chem. 2023,*** *88,* 14413-14422**. DOI: 10.1021/acs.joc.3c01442.**

- *"Visible-Light Driven Acetoxylation and Dioxygenation of Indoles via Electron Donor-Acceptor Complexes"* Aditya Paul, Arunava Sengupta and **Somnath Yadav*** ***Chemical Communications*****, 2023**, *59*, 7455-7458**. DOI: 10.1039/D3CC01683H**

- *"Organophotoredox catalyzed cross-dehydrogenative sulfonamidation of indoles and other heterocycles"* Aditya Paul, Arunava Sengupta and **Somnath Yadav*** ***J. Org. Chem.*** **2023**, *88*, 9599-9614**. DOI: 10.1021/acs.joc.2c02022.**

- *"Chemical synthesis of the O-antigen repeating unit of Actinobacillus actinomycetemcomitans serotype f"* Tanmoy Halder, Sunil K. Yadav and **Somnath Yadav*** ***Carbohydrate Research*****, 2023**, *534*, 108977. **DOI: 10.1016/j.carres.2023.108977**

- *"Stereoselective synthesis of glycosyl azides from anomeric hydroxides via protecting group manipulations"* Sourav Nayak and **Somnath Yadav*** ***Carbohydrate Research*****, 2023,** *523*, Article No. 108739. **DOI: 10.1016/j.carres.2023.108739**

- *"Synthesis of the trisaccharide repeating unit of Stenotrophomonas maltophilia O6 antigen through step-wise and one-pot approaches"* Tanmoy Halder, Sunil K. Yadav and **Somnath Yadav*** ***Carbohydrate Research***, **2022**, *521*, 108669**.** **DOI: 10.1016/j.carres.2022.108669.**

- *"Structure-gelation property relations of phenolic glycosides of pentose sugars: pH dependent controlled release of curcumin"* N. P. Pathak, A. Sengupta and **Somnath Yadav***, ***Materials Advances***, **2022**, *3*, 3906-3914**. DOI: 10.1039/D1MA00907A.**

- *"Visible light mediated synthesis of 3-sulfonylquinolines: Mechanistic insights into the photoredox catalysis*" Aditya Paul, S. Banerjee and **Somnath Yadav***, *Asian Journal of Chemistry*, ***Asian Journal of Organic Chemistry***, **2022**, *11*, Article No. e202100629. **DOI: 10.1002/ajoc.202100629**

- *"Total synthesis of the O-antigen repeating unit of Providencia stuartii O49 serotype through linear and one-pot assemblies"* Tanmoy Halder and **Somnath Yadav***, ***Beilstein Journal of Organic Chemistry*** **2021**, *17*, 2915-2921. **DOI: 10.3762/bjoc.17.199**

- *"Short synthesis of molnupiravir (EIDD-2801) via a thionated uridine intermediate"* Raghunath Dey, Sourav Nayak, Parthasarathi Das and **Somnath Yadav*** ***ACS Omega***, **2021**, *6*, 28366-28372. **DOI: 10.1021/acsomega.1c04550**

- *"A gelator-starch blend for dry powder based instant solidification of crude oil at room temperature"* Navendu P. Pathak, Rajkamal and **Somnath Yadav*** ***Chemical Communications***, **2020**, 56, 2999-3002. **DOI: 10.1039/C9CC09943C**

- *"Ligand and Cu free N-arylation of indoles, pyrroles and benzylamines with aryl halides catalyzed by a Pd nanocatalyst"* Abhijit Paul, Debnath Chatterjee, Srirupa Banerjee and **Somnath Yadav*** ***New Journal of Chemistry***, **2020,** *44*, 14447-14452. **DOI: 10.1039/D0NJ02129F**

- *"Synthesis of 3-alkenylindoles through regioselective C–H alkenylation of indoles by a ruthenium nanocatalyst"* Abhijit Paul, Debnath Chatterjee, Srirupa Banerjee and **Somnath Yadav*** ***Beilstein Journal of Organic Chemistry*** **2020**, *16*, 140-148. **DOI: 10.3762/bjoc.16.16**

- *"Direct Synthesis of 3-Arylquinolines by a Nano Pd-Catalyzed Regioselective C3-H Arylation of Quinolines"* Abhijit Paul, Aditya Paul and **Somnath Yadav*** ***Tetrahedron Letters***, **2020**, *51*, 151364. **DOI: 10.1016/j.tetlet.2019.151364**

- "*Syntheses of Orthogonally Protected D-Galactosamine, D-Allosamine and D-Gulosamine Thioglycoside Building Blocks with N-phthalimido Groups"* Debnath Chatterjee, Sourav Nayak, Abhijit Paul and **Somnath Yadav*** ***Asian Journal of Organic Chemistry***, **2019**, 8, 2065-2072. **DOI: 10.1002/ajoc.201900397**.

- *"Partially acetylated or benzoylated arabinose derivatives as structurally simple gelators: Effect of the ester protecting group on gel properties"* Rajkamal, Navendu P. Pathak, Tanmoy, Halder, Shubhajit Dhara and **Somnath Yadav*** ***Chemistry – A European Journal***, **2017**, *23*, 11323-11329. **DOI: 10.1002/chem.201701669**

- *"DAIB/TEMPO mediated synthesis of anomeric lactones from anomeric hydroxides"* Debnath Chatterjee, Tanmoy Halder, Navendu P. Pathak, Abhijit Paul, Rajkamal and **Somnath Yadav*** ***Tetrahedron Letters***, **2017**, *58*, 1943-1946. **DOI: 10.1016/j.tetlet.2017.04.019**

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- "*Time resolved spectroscopic investigation to compare the photophysical properties of a short chain dyad when combined with silver and gold nanoparticles to form nanocomposite systems*" G. Dutta (Pal), P. Chakraborty, **Somnath Yadav**, A. De. M. Bardhan, P. Kumbhakar, S. Biswas, H. S. DeSarkar, T. Ganguly*, *J. Nanoscience and Nanotechnology*, **2016**, *16*, 7411-7419.

- *"Photochemically synthesized palladium nanoparticles with catalytic activity at ppb levels for C-C coupling reactions"* Abhijit Paul, Debnath Chatterjee, Rajkamal, Srirupa Banerjee and **Somnath Yadav*** *RSC Advances*, **2015**, *5*, 71253-71258. **DOI: 10.1039/C5RA14995A**

- *"$Cu(ClO_4)_2.6H_2O$ catalyzed solvent free per-O-acetylation and sequential one-pot conversions of sugars to thioglycosides"* Debnath Chatterjee, Abhijit Paul, Rajkamal and **Somnath Yadav*** ***RSC Advances***, **2015**, *5*, 29669-29674. **DOI: 10.1039/C5RA03461B**

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- "*Time resolved spectroscopic studies on a novel synthesized photoswitchable organic dyad and its nanocomposite form in order to develop light energy conversion devices"* Gopa Dutta (Pal), Abhijit Paul, **Somnath Yadav**, Munmun Bardhan, Asish De, Joydeep Chowdhury, Aindrila Jana and Tapan Ganguly*****, *J. NanoScience and Nanotechnology*, **2015**,15, 5775-5784.

- "*Enantiomeric organogelators from D-/L- arabinose for phase selective gelation of crude oil and their gel as a photochemical micro reactor*" Rajkamal, Debnath Chatterjee, Abhijit Paul, Srirupa Banerjee and **Somnath Yadav*** ***Chemical Communications***, **2014**, 50, 12131-12134. **DOI: 10.1039/C4CC05950F**

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- "*Synthesis of bicyclo[3.2.1]octanones via ketyl radical promoted rearrangements under reductive PET conditions*" **S. Yadav**, S. Banerjee, D. Maji, S. Lahiri ***Tetrahedron,*** **2007**, *63*, 10979-10990. **DOI: 10.1016/j.tet.2007.08.054**

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Patents

"A Process for the Preparation of Molnupiravir (EIDD-2801)" Indian Patent Application No. 202131023578, **2021.**

Lectures in Conferences/Seminars

- *"Supramolecular gelators from arabinose"* **CARBO XXXIII, Sweet '18 – Glycochemistry, Biology and Technology (SGBT '18)** Organized by IISER Kolkata & Association of Carbohydrates Chemists & Technologists of India (ACCTI), 19-21 December, 2018.