

Dr. Pralay Das, Ph.D., FRSC

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Main Research Domain

- Development of polystyrene-supported nanocomposite materials as catalyst (Pd@PS, Rh@PS, Au@PS, Ru@PS, etc.) for C-C, C-X coupling, oxidation, carbonylation, oxidative esterification and reduction reactions emphasis on regio- and chemo-selectivity.
- Heterogeneous nano-catalytic approaches for CO/CO₂ fixation reactions using oxalic acid as bench stable C1 surrogate.
- Semi-synthetic approaches for total synthesis of biologically active benzosuberene/benzocycloheptene compounds from *Cedrus deodara* oil, a natural precursor.
- Scalable process for commercially important cyclohexane-1,3-diones production.
- Furan based bio-chemicals production from bio-mass, scale-up process.

Education

- **Ph.D.** (2006, submitted 2005), Department of Chemistry, University of North Bengal, Darjeeling, West Bengal, India.
- **M.Sc.** (2000), Organic Chemistry, Department of Chemistry, University of North Bengal, Darjeeling, West Bengal, India.
- **B.Sc. (Chem. Hons)** (1998), Malda College, NBU, West Bengal.

Professional/Postdoctoral Positions Held

- **2021-Continuing:** Senior Principal Scientist and Head of Chemical Technology Division, CSIR-IHBT & Professor, AcSIR.
- **2016-2021:** Principal Scientist & Head of Chemical Technology Division.
- **2012-2016:** Senior Scientist & Assistant Professor, same division.
- **2008-2012:** Scientist & Assistant Professor, Natural Product Chemistry and Process Development Division, Institute of Himalayan Bioresource Technology (Council of Scientific and Industrial Research), Palampur (H.P.)-176061, India.
- **2007-2008:** Senior Research Scientist, Chembiotek, Division of TCG Lifesciences Ltd., Kolkata, W.B., India
- **2005-2007:** Post-Doctoral Fellow, Under the supervision of Prof. Fredrik Almqvist, Department of Organic Chemistry, Umea University, Umea, Sweden

Awards & Recognitions

- **2024:** Certificate of Merit for the Best Research Paper Publication 2023, CSIR-IHBT.
- **2022:** Chemical Research Society of India (CRSI), Bronze Medal 2022.
- **2022:** Fellow of the Royal Society of Chemistry (FRSC), London.
- **2021:** Affiliate member of Royal Society of Chemistry (RSC), London.
- **2020:** Honorary Rosalind (Franklin) Member of London Journals Press, Membership ID #UB66344.
- **2019-2021:** Bentham Ambassador, Bentham Science Publishers.
- **2016:** ACS Publications Award, Certificate of Recognition for Reviewing Activities.
- **2011-12:** Member of American Nano Society, Member ID: 113120.
- **2006:** Tetrahedron Letters Most Cited Paper 2003–06 Award” by Elsevier Ltd. Oxford, UK. Microwave-assisted Suzuki coupling on a KF–alumina surface: synthesis of polyaryls, Basudeb Basu, Pralay Das, Md. M. H. Bhuiyan and Satadru Jha, *Tetrahedron Letters*, 2003, 44(19), 3817-3820.
- **2005-2007:** Post-Doctoral Fellowship, Umea University, Umea, Sweden.
- **2002-2004:** Junior Research Fellowship during Ph.D. studies in NBU.
- **2004-2005:** Senior Research Fellowship during Ph.D. studies in NBU.
- **2003-Continuing:** Life Member- Chemical Research Society of India, Member ID: LM551.

Invited Lectures:

- **7th July 2022:** Invited Bronze Medal Lecture in the 29th CRSI National Symposium in Chemistry & CRSI-ACS Symposium Series in Chemistry (7-9th July, 2022) held at IISER, Mohali.
- **23 May 2022:** Invited lecture, Chemical Sciences Symposium, IIT- Mandi
- **08 November 2021:** Invited lecture, Ural Federal University, Russia.
- **08 December 2020:** Online Webinar, National Institute of Technology Manipur.
- **01 December 2020:** Faculty Induction Programme (FIP-02), University of North Bengal, West Bengal.
- **22 July 2020:** National Webinar on “Green and Sustainable Chemistry”, collaboration programme of University of North Bengal and Gour Banga University, West Bengal.
- **22 June 2020:** Webinar lecture organized by JC DAV College, Dasuya, Punjab.
- **9-11 January 2020:** International Conference on Chemistry for Human Development, jointly organized by Prof. Asima Chatterjee Foundation, Heritage Institute of Technology (HIT), Kolkata.
- **25-26 February 2019:** Indo-German Workshop on Waste to Wealth IGW3-2019, CSIR-AMPRI, Bhopal (MP), India.
- **15-16 February 2019:** 8th Symposium on Advances in Chemical Sciences, Guru Nanak Dev University, Amritsar.
- **11-12 May 2018:** 2nd National Symposium on Shaping the Energy Future: Challenges & Opportunities (SEFCO-2018), CSIR-Indian Institute of Petroleum, Dehradun.
- **20-21 February 2017:** Frontier in Chemistry, University of North Bengal, Darjeeling, WB.
- **2-3 February 2016:** Vth National Symposium on Advances in Chemical Sciences, Guru Nanak Dev University, Amritsar.

Ph.D. Awarded: As a Guide: 16 (sixteen)

(One Ph.D. student Dr. Nitul R. Guhar received **Royal Society-SERB Newton International Post-Doc Fellow**, 2016-2018 and another student got Dr. Dhananjay Bhattacharjee received **Marie-Curie Postdoctoral Fellowship**, 2022-2024)

Ph.D. Guiding: 8 (eight)

Post-Graduate: Master Thesis Guided: 15 (fifteen)

*Corresponding author

List of Publications

Publications:

139. Mahender Kumar, Rohit Bains, Arvind Singh Chauhan, Ajay Kumar, **Pralay Das***. A straightforward process for conversion of de-oiled lemon grass (*Cymbopogon citratus*) waste into 5-hydroxymethylfurfural and furfural. *Renewable Energy* **2025**, *244*, 122657. (IF-9.0)

138. Ajay Kumar Sharma, Poonam Sharma, Pushkar Mehara, **Pralay Das***. Molecular combination between alkanolamines and galvinoxol for ratiometric colorimetric sensing of CO₂ gas. *Analyst* **2025**, doi.org/10.1039/D4AN01557F. (IF-4.2)

137. Poonam Sharma, Pushkar Mehara, **Pralay Das***. Supported Pd-catalyzed regioselective carbonylative indenones synthesis employing oxalic acid as CO source. *Molecular Catalysis* **2025**, *575*, 114891. (IF-3.9)

136. Ashish Kumar, Poonam Sharma, Sheetal, Navneet Sharma, Kousik Giri, **Pralay Das***. Pd-Catalyzed Tandem Approach for 1, 2, 3-Triazolo-azepine Fused Benzosuberene and 1, 2, 3-Triazolobenzazepines Synthesis. *J. Org. Chem.* **2025**, *90*(6), 2180–2191. (IF-3.3)

135. Prince Anand, Jyoti Chhimwal, Sumit Dhiman, Yamini, Vikram Patial, **Pralay Das**, Zabeer Ahmed, Utpal Nandi, Mahvash Tavassoli, Yogendra Padwad. Evaluation of Pyrrolone-Fused Benzosuberene MK2 Inhibitors as Promising Therapeutic Agents for HNSCC: In Vitro Efficacy, In-Vivo Safety, and Pharmacokinetic Profiling. *Drug Development Research* **2025**, *86* (2), e70062. (IF-3.5)

134. Bhanu Sharma, Ashish Kumar, **Pralay Das**, Rituraj Purohit. Identification of novel vesicular monoamine transporter 2 (VMAT2) inhibitors: A structure-based approach. *Journal of Molecular Liquids* **2025**, *417*, 126667. (IF-5.3)

133. Dharminder Sharma, Manish Kumar, Sandeep Kumar, Megha Mehta, **Pralay Das***. Cyclohexane-1, 3-dione Derivatives: Versatile Precursors for Total Synthesis of Natural Products. *Tetrahedron* **2025**, *171*, 134395. (IF-2.1)

132. Bhanu Sharma, Shubham Nilkanth Rahmatkar, Ashish Kumar, **Pralay Das**, Damanpreet Singh, Rituraj Purohit. Identification and evaluation of olefinated benzosuberene analogue as a phosphodiesterase-4D inhibitor with efficacy in a zebrafish larva model of pentylenetetrazole-induced seizures. *Chemical Engineering Journal*, **2025**, *507*, 160272. (IF-13.4)

131. Pushkar Mehara, Poonam Sharma, Rohit Bains, Ajay Kumar Sharma, **Pralay Das***. Pd/C-catalyzed regiodivergent hydrocarboxylation and esterification of alkynes. *Chemical Science* **2024**, *15* (44), 18379-18386. (IF-7.6)
130. Arvind Singh Chauhan, Ajay Kumar, Rohit Bains, Mahender Kumar, Navneet Sharma, Kousik Giri, **Pralay Das***. Energy-barrier-less synthesis of hexaaza-trifuranacyclopenta decaphane-hexaene at ambient temperature. *Org. Lett.* **2024**, *26*, 8159. (IF-4.9)
129. Ashish Kumar, Mahender Kumar, Poonam Sharma, **Pralay Das***. 1,2,3-triazole-guided multi-component sonogashira coupling of substituted benzosuberenes derived from cedrus deodara oil. *Synthesis* **2024**, *56*, DOI: 10.1055/s-0040-1720130. (IF-1.9)
128. Rohit Bains, Arvind Singh Chauhan, Ajay Kumar, Mahender Kumar, **Pralay Das***. 5-Hydroxymethylfurfural and furfural synthesis from waste paper, cotton and poly/mono-meric carbohydrates. *Biomass and Bioenergy*, **2024**, *188*, 107314. (IF-5.8)
127. Ajay Kumar, Arvind Singh Chauhan, Rohit Bains, **Pralay Das***. Synergetic oxidative esterification of 5-hydroxymethylfurfural using Pd-Au bimetallic nanocomposite under mild conditions. *Chemical Engineering Journal*, **2024**, *481*, 148153. (IF-15.1)
126. Sheetal, Poonam Sharma, Ashish Kumar, Navneet Sharma, Kousik Giri, and **Pralay Das***. Oxalic acid as a dual C1 surrogate for heterogeneous palladium-catalyzed tandem four-component quinazolinone synthesis. *ChemComm.* **2024**, DOI: 10.1039/D4CC01084A. (IF-4.9)
125. Poonam Sharma, Pushkar Mehara, Ajay Kumar Sharma, **Pralay Das***. Supported Pd-catalyzed decarboxylative carbonylation reaction of 2-alkynoic acids and aryl iodides. *Catal. Sci. Technol.*, **2024**, *14*, 1588-1594. (IF-5.0)
124. Ashish Kumar, Yamini, Pushkar Mehara, Poonam Sharma, **Pralay Das***. 1,2,3-Triazole-Assisted Heck Cross-Coupling for the Synthesis of Olefinated Benzosuberene Analogues from *Cedrus deodara* Oil, *Eur. J. Org. Chem.*, **2024**, *27*, e202300988. (IF-2.8)
123. Ajay Kumar Sharma, Mohini Verma, Bidisha Biswas, Amitabha Acharya, Subrata Ghosh, and **Pralay Das***. Galvinol as ratiometric naked-eye colorimetric moisture sensor: Synthesis process development, applications and mechanistic studies, *Sensors and Actuators B: Chemical*, **2024**, *409*, 135588. (IF-8.4)
122. Pushkar Mehara, Ajay Kumar Sharma, Poonam Sharma, **Pralay Das***. Supported Pd-catalyzed ring opening and chemoselective aminocarbonylative coupling of benzoxazoles with aryl iodides, *Catal. Sci. Technol.*, **2024**, <https://doi.org/10.1039/D4CY00070F> (IF-5.0)
121. Arvind Singh Chauhan, Ajay Kumar, Rohit Bains, Mahender Kumar, **Pralay Das***. A comprehensive study of palladium-based catalysts on different supports for the hydrogenolysis of 5-hydroxymethylfurfural (HMF) to 2, 5-dimethylfuran (DMF) biofuel. *Biomass and Bioenergy*, **2024**, *185*, 107209. (IF-6.0)
120. Yamini, Ashish Kumar, Pushkar Mehara, **Pralay Das***. Palladium-catalyzed domino reaction for the synthesis of benzo-cyclohepta-quinolinone analogues from *Cedrus deodara* oil. *Appl Organomet Chem.* **2024**, e7514, <https://doi.org/10.1002/aoc.7514>. (IF-3.9)

119. Ajay Kumar Sharma, Poonam Sharma, Pushkar Mehara, **Pralay Das***. *In-situ* formed aryl acid-triggered intramolecular dehydrative cyclization whilst supported Pd-catalyzed carbonylative synthesis of 2-aryl benzimidazoles. *Chemical Engineering Journal*. **2023**, *471*, 144666. (IF-15.1)
118. Abhishek Goel, Yamini, Chitralkha Gusain, Bhanu Sharma, Rituraj Purohit, **Pralay Das***. Yogendra Padwad. Synthesis, anti-adipogenic, and insulin-sensitizing potential of benzosuberene-alkyl sulfone (BSAS) analogues. *Chemistry an Asian Journal*, **2023**, *18*, e202300179. (IF-4.1)
117. Yamini, Ashish Kumar, **Pralay Das***. Rhodium Catalyzed Carbonylative Approaches for Heterocycles Synthesis. *Chemistry Select*. **2023**, *8*, e202204453. (IF-2.1)
116. Dharminder Sharma, Manish Kumar, Sandeep Kumar, Dhananjay Bhattacharjee, Arun Kumar Shil, Megha Mehta, **Pralay Das***. β -Enaminones from cyclohexane-1,3-diones: Versatile precursors for nitrogen and oxygen-containing heterocycles synthesis. *Synthetic Communications* **2023**, *53*, 953–993. (IF-2.1)
115. Pushkar Mehara, Poonam Sharma, Ajay Kumar Sharma, Shaifali, **Pralay Das***. ppm level supported Pd-catalyzed carbonylative Suzuki–Miyaura cross-coupling of aryl iodides using oxalic acid as CO source. *Molecular Catalysis* **2023**, *550*, 113546. (IF-4.6)
114. Yamini, Prince Anand, Vijay Kumar Bhardwaj, Ashish Kumar, Rituraj Purohit, **Pralay Das***, Yogendra Padwad. Novel pyrrolone-fused benzosuberene MK2 inhibitors: synthesis, pharmacophore modelling, molecular docking, and anti-cancer efficacy evaluation in HNSCC cells. *Journal of Biomolecular Structure & Dynamics*, **2023**, *41*, 1-22. doi.org/10.1080/07391102.2023.2265993. (IF-4.4)
113. Sheetal, Arvind Singh Chauhan, Ajay Kumar Sharma, Navneet Sharma, Kousik Giri and **Pralay Das***. Pd/C-catalyzed carbonylative amidation for the synthesis of 2-carboxamidocyclohexane-1,3-diones. *Org. Lett.* **2023**, *25*, 8188-8193. (IF-5.2)
112. Shaifali, Poonam Sharma, Pushkar Mehara, **Pralay Das***. Supported Palladium-Catalyzed Tandem Synthesis of 2-(Alkylamino/amino)-3-arylquinazolin-4(3H)-ones Employing CO Source. *Chemistry: An Asian Journal*, **2023**, *18* (6), e202201288. (IF-4.83)
111. Vijay Kumar Bhardwaj, **Pralay Das**, Rituraj Purohit*. Integrating microsecond timescale classical and biased molecular dynamics simulations to screen potential molecules for BRD4-BD1. *Chaos, Solitons & Fractals.*, **2023**, *167*,113061. (IF-9.922)
110. Ajay Kumar, Arvind Singh Chauhan, Rohit Bains and **Pralay Das***. An unconventional iron oxide catalyst for 5-hydroxymethylfurfural oxidation to 2,5-diformylfuran. *Org. Biomol. Chem.*, **2023**, *21*, 3829-3836. (IF-3.89)
109. Ajay Kumar, Arvind Singh Chauhan, Rohit Bains and **Pralay Das***. Catalytic transformations for agro-waste conversion to 5-hydroxymethylfurfural and furfural: Chemistry and scale-up development. *Green Chem.*, **2023**, *25*, 849–870. (IF-11.03)
108. Sheetal, Pushkar Mehara, and **Pralay Das***. Methanol as a greener C1 synthon under non-noble transition metal-catalyzed conditions. *Coordination Chemistry Reviews*, **2023**, *475*, 214851 (IF-24.833)

107. Dharminder Sharma, Manish Kumar, Sandeep Kumar, Dhananjay Bhattacharjee, Arun Kumar Shil, Megha Mehta, and **Pralay Das***. β -Enaminones from cyclohexane-1,3-diones: Versatile precursors for nitrogen and oxygen-containing heterocycles synthesis. *Synthetic Communication*, **2023**, *53* (13), 953–993. (IF-1.937)
106. Ajay Kumar Sharma, Sheetal, Pushkar Mehara, and **Pralay Das***. Polystyrene stabilized Pd-Au nanoalloy for efficient synthesis of bis(indolyl)methanes from aryl iodides using oxalic acid as CO and H₂ source. *Journal of Industrial and Engineering Chemistry*, **2023**, *119*, 199–207. (IF- 6.76)
105. Shankar Ram, Pushkar Mehara, Ashish Kumar, Ajay Kumar Sharma, Arvind Singh Chauhan, Ajay Kumar, **Pralay Das***. Supported-Pd catalyzed carbonylative synthesis of phthalimides and isoindolinones using Oxalic acid as in situ CO surrogate with 2-iodobenzamides and 2-iodobenzylanilines in ppm-level catalyst loading. *Molecular Catalysis* **2022**, *530*, 112606. (IF-5.08)
104. Rohit Bains, Ajay Kumar, Arvind Singh Chauhan, **Pralay Das***. Dimethyl carbonate solvent assisted efficient conversion of lignocellulosic biomass to 5-Hydroxymethylfurfural and furfural. *Renewable Energy* **2022**, *197*, 237-243. (IF-8.63)
103. Arvind Singh Chauhan, Ajay Kumar, Rohit Bains, **Pralay Das***. Solid acid catalysed one-pot selective approach for 2,5-diformylfuran synthesis from fructose/carbohydrate feedstocks. *Green Chem.*, **2022**, *24*, 6125-6130. (IF-11.03)
102. Rahul Singh, Vijay Kumar Bhardwaj, Pralay Das, Dhananjay Bhattacharjee, Grigory V Zyryanov, Rituraj Purohit. Benchmarking the ability of novel compounds to inhibit SARS-CoV-2 main protease using steered molecular dynamics simulations. *Computers in Biology and Medicine* **2022**, *146*, 105572. (IF-4.58)
101. Ajay Kumar Sharma, Pushkar Mehara, **Pralay Das***. Recent Advances in Supported Bimetallic Pd–Au Catalysts: Development and Applications in Organic Synthesis with Focused Catalytic Action Study, *ACS Catal.* **2022**, *12*, 6672–6701. (IF-13.08)
100. Rahul Singh, Vijay Kumar Bhardwaj, **Pralay Das** and Rituraj Purohit*. Identification of 11 β -HSD1 inhibitors through enhanced sampling methods, *ChemComm.* **2022**, DOI: 10.1039/D1CC06894F. (IF-6.22)
99. Dharminder Sharma, Manish Kumar, Sandeep Kumar, Amartya Basu, Dhananjay Bhattacharjee, Abha Chaudhary, **Pralay Das***. Application of Cyclohexane-1,3-diones in the Synthesis of Six-Membered Nitrogen-Containing Heterocycles, *ChemistrySelect* **2022**, *7*(12): e202200622 <https://doi.org/10.1002/slct.202200622>. (IF-2.10)
98. Yamini, Saurabh Sharma, **Pralay Das***. Rhodium catalyzed 2-alkyl-benzimidazoles synthesis from benzene-1,2-diamines and tertiary alkylamines as alkylating agents, *Appl Organomet Chem.* **2021**;e6278. (IF-4.10)
97. Sachin Kumar, Vijay Kumar Bhardwaj, Rahul Singh, **Pralay Das**, Rituraj Purohit*. Evaluation of plant-derived semi-synthetic molecules against BRD3-BD2 protein: a

computational strategy to combat breast cancer, *Mol. Syst. Des. Eng.*, **2022**, *7*, 381-391. (IF-4.83))

96. Sachin Kumar, Vijay K. Bhardwaj, Rahul Singh, **Pralay Das**, Rituraj Purohit*, Identification of acridinedione scaffolds as potential inhibitor of DENV-2 C protein: An in silico strategy to combat dengue *J Cell Biochem*, **2022**, *123*, 935–946. (IF-4.42)

95. Shaifali, Sheetal, **Pralay Das***. Supported palladium catalyzed carbonylative coupling reactions using carbon monoxide as C1 source, *The Chemical Record* **2021**, *22*, e202100157. (IF-6.77)

94. Vijay kumar Bhardwaj, **Pralay Das**, Rituraj Purohit*. Identification and comparison of plant-derived scaffolds as selective CDK5 inhibitors against standard molecules: Insights from umbrella sampling simulations, *Journal of Molecular Liquids* **2022**, *348*, 118015. (IF-6.16)

93. Sandeep Kumar, Akshay Kumar, Dharminder Sharma, **Pralay Das***. Free Amine, Hydroxyl and Sulfhydryl Directed C–H Functionalization and Annulation: Application to Heterocycle Synthesis, *The Chemical Record* **2021**, doi.org/10.1002/tcr.202100171. (IF-6.77)

92. Ajay Kumar, Arvind Singh Chauhan, Rohit Bain, **Pralay Das***. Rice Straw (*Oryza sativa* L.) Biomass Conversion to Furfural, 5-Hydroxymethylfurfural, Lignin and Bio-char: A Comprehensive Solution. *J. Ind. Eng. Chem.*, **2021**, *104*, 286-294. (IF-6.06)

91. Sheetal, Ajay Kumar Sharma, Shaifali, Dhananjay Bhattacharjee, Navneet Sharma, Kousik Giri, **Pralay Das***. Supported-Pd catalyzed tandem approach for N-arylbenzamide synthesis. *Molecular Catalysis*, **2021**, *516*, 111948. (IF-5.06)

90. Dhananjay Bhattacharjee, Shaifali, Ajay Kumar, Grigory V. Zyryanov, **Pralay Das***. Polystyrene stabilized iridium nanoparticles catalyzed chemo- and regio-selective semi-hydrogenation of nitroarenes to N-arylhydroxylamines, *Molecular Catalysis* **2021**, *514*, 111836. (IF-5.06)

89. Arvind Singh Chauhan, Ajay Kumar, Ajay Kumar Sharma, **Pralay Das***. Pd-Catalysed Decarbonylation Free Approach to Carbonylative Esterification of 5-HMF to Its Aryl Esters Synthesis Using Aryl Halides and Oxalic Acid as C1 Source, *Chem. Eur. J.* **2021**, *27* (51), 12971-12975. (IF-5.23)

88. Dharminder Sharma, Manish Kumar, **Pralay Das***. Synthetic approaches for cyclohexane-1, 3-diones: A versatile precursor for bioactive molecules, *Synthetic Communication*, **2021**, *51*, 2553-2573. (IF-2.0)

87. Ajay Kumar, Arvind Singh Chauhan, **Pralay Das***. Lignocellulosic biomass and carbohydrates as feed-stock for scalable production of 5-hydroxymethylfurfural, *Cellulose* **2021**, *28*, 3967-3980. (IF-5.27)

86. Richa Bharti, VK Bhardwaj, C Bal Reddy, Rituraj Purohit, **Pralay Das***. Benzosuberone-sulfone analogues synthesis from *Cedrus deodara* oil and their therapeutic evaluation by

computational analysis to treat type 2 diabetes, *Bioorganic Chemistry* **2021**, *112*, 104860. (IF-5.27)

85. Arvind Singh Chauhan, Ajay Kumar, **Pralay Das***. Metal Catalyst and Hydrogen Gas-Free Selective Reduction of Biomass-Derived Substituted Furfuraldehyde to Alkyl Furan as a Key Biofuel Additive, *Org. Process Res. Dev.* **2021**, *25*, 4, 892-899. (IF-3.31)

84. Shaifali, Pushkar Mehara, Ashish Kumar, **Pralay Das***. Pd/C catalyzed cascade synthesis of 2-arylquinazolinones from 2-iodoacetanilides employing ammonia and CO precursors, *ChemCatChem*, **2021**, doi.org/10.1002/cctc.202100152. (IF- 5.68)

83. Dhananjay Bhattacharjee, Matiur Rahman, Sumit Ghosh, Avik Bagdi, Grigory Zyryanov, Oleg Chupakhin, **Pralay Das***, Alakananda Hajra. Advances in Transition-Metal Catalyzed Carbonylative Suzuki-Miyaura Coupling Reaction: An Update, *Adv. Synth. Catal.* **2021**, *363*, 1597-1624. (IF-5.83)

82. Jatin Sharma, Vijay Kumar Bhardwaj, **Pralay Das**, Rituraj Purohit*. Plant molecules identified as potential inhibitor against tobacco mosaic virus: A biosimulation approach, *Pesticide Biochemistry and Physiology* **2021**, 104858. (IF-3.96)

81. Rahul Singh, Vijay Kumar Bhardwaj, Jatin Sharma, **Pralay Das**, Rituraj Purohit*. Identification of selective cyclin-dependent kinase 2 inhibitor from the library of pyrrolone-fused benzosuberene compounds: an in silico exploration, *Journal of Biomolecular Structure and Dynamics* **2021**, doi.org/10.1080/07391102.2021.1900918. (IF-3.55)

80. Shankar Ram, Ajay Kumar Sharma, Arvind Singh Chauhan, **Pralay Das***. Palladium-catalyzed ortho-halogen-induced deoxygenative approach of alkyl aryl ketones to 2-vinylbenzoic acids. *Chem. Commun.*, **2020**, *56*, 10674-10677. (IF-6.22)

79. Dharminder Sharma, Manish Kumar, **Pralay Das***. Application of Cyclohexane-1, 3-diones for Six-Membered Oxygen-Containing Heterocycles Synthesis, *Bioorganic Chemistry*, **2020**, *107*, 104559. (IF-5.27)

78. Ajay K. Sharma, Shankar Ram, Pushkar Mehara, Arvind Singh Chauhan, **Pralay Das***. Supported Palladium-Gold Catalyzed Carbonylative Methylthioesterification of Aryl Iodides using Oxalic acid and DMSO as CO and CH₃SH Surrogates, *Asian Journal of Organic Chemistry*, **2020**, *9* (12), 2099-2102. (IF-3.31)

77. Rahul Singh, Vijay Bhardwaj, **Pralay Das**, Rituraj Purohit*. Natural analogues inhibiting selective cyclin-dependent kinase protein isoforms: a computational perspective, *Journal of Biomolecular Structure and Dynamics*, **2020**, *38* (17), 5126-5135. (IF-3.39)

76. Shaifali, Sheetal, Rohit Bains, Ajay Kumar, Shankar Ram and **Pralay Das***. Supported palladium catalyzed aminocarbonylation of aryl iodides employing bench-stable CO and NH₃ surrogates. *Org. Biomol. Chem.*, **2020**, *18*, 7193-7200. (IF-3.87)

75. Rahul Singh, Vijay K. Bhardwaj, Jatin Sharma, **Pralay Das**, Rituraj Purohit*. Discovery and in silico evaluation of aminoarylbenzosuberene molecules as novel checkpoint kinase 1 inhibitor determinants. *Genomics*, **2020**, doi.org/10.1016/j.ygeno.2020.10.001. (IF-6.2)
74. Vijay K. Bhardwaj, Rahul Singh, **Pralay Das**, Rituraj Purohit*. Evaluation of acridinedione analogs as potential SARS-CoV-2 main protease inhibitors and their comparison with repurposed anti-viral drugs, *Computers in Biology and Medicine*, **2020**, *128*, 104117. (IF-4.58)
73. Dhananjay Bhattacharjee*, Grigory V. Zyryanov, **Pralay Das**. Recent advances in the synthetic approaches to 2-pyridones. *Chemistry of Heterocyclic Compounds*, **2020**, *56(9)*, 1152–1154. (IF-1.51)
72. Vijay Kumar Bhardwaj, Rahul Singh, Jatin Sharma, **Pralay Das**, Rituraj Purohit*. Structural based study to identify new potential inhibitors for Dual Specificity Tyrosine-Phosphorylation-Regulated Kinase. *Computer Methods and Programs in Biomedicine*, **2020**, *194*, 105494. (IF-6.2)
71. J Sharma, V Bhardwaj, **Pralay Das**, Rituraj Purohit*. Identification of naturally originated molecules as γ -aminobutyric acid receptor antagonist. *Journal of Biomolecular Structure and Dynamics*, **2020**, *39 (3)*, 911-922. (IF- 3.39)
70. Dhananjay Bhattacharjee, Shaifali Kang, Ajay Kumar, Ajay Sharma, Rituraj Purohit, **Pralay Das***. Iodine (III) Promoted Ring-Rearrangement Reaction of 1-Arylamino-2-oxocyclopentane-1-carbonitriles to Synthesize N-Aryl- δ -valerolactams. *Org. Biomol. Chem.*, **2020**, *18*, 745 –749. (IF-3.87)
69. R Singh, V Bhardwaj, **Pralay Das**, Rituraj Purohit*. Natural analogues inhibiting selective cyclin-dependent kinase protein isoforms: a computational perspective. *Journal of Biomolecular Structure and Dynamics*, **2019**, *38:17*, 5126-5135. (IF- 3.3)
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Research Group

Ph.D. Awarded:

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2. Dr. Arvind Singh Chauhan: “Sustainable approaches for the synthesis of furan analogues from biomass derived carbohydrates”, **2024**, AcSIR, Ghaziabad, India.
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15. Dr. Bandna, Thesis title: "Exploration of Interface Reagent and Solid Supported Palladium Catalyst for Cross Coupling and Oxidation Reactions", **2013**, Guru Nanak Dev University, Amritsar, Punjab.
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