

List of publications (2019-2024)

1. US Mir, Mushtaq A, Saqib N, WW Tantray and **Altaf M.** Diet-Induced Histone Modifications: Implications for Human Health and Diseases, **Molecular Mechanisms in Nutritional Epigenetics, Springer Nature, 2024.**
2. Mushtaq A, Mir US, **Altaf M.** Multifaceted functions of RNA-binding protein vigilin in gene silencing, genome stability, and autism-related disorders. **Journal of Biological Chemistry.** 2023 Mar;299(3):102988
3. Bashir S, Banday M, Qadri O, Pal D, Bashir A, Hilal N, **Altaf M,** Fazili KM. The Bcl-2 family protein bid interacts with the ER stress sensor IRE1 to differentially modulate its RNase activity. **FEBS Lett.** 2023 Apr;597(7):962-974. doi: 10.1002/1873-3468.14593
4. Arjamand Mushtaq, Nissar UI Ashraf and **Altaf M.** The mTORC1-G9a-H3K9me2 axis negatively regulates autophagy in fatty acid-induced hepatocellular lipotoxicity. **Journal of Biological Chemistry.** 2023 Jan 20:102937. doi: 10.1016/j.jbc.2023.102937.
5. Sharmistha Chakraborty, Mayank Singh, Raj K. Pandita, **Altaf M** and Tej K. Pandita et al. Heat-induced SIRT1-mediated H4K16ac deacetylation impairs resection and SMARCAD1 recruitment to double strand breaks. **iScience, 104142, 2022.**
6. Shah AT, Reshi ZA and **Altaf M.** DNA Methylation of ABC Transporters Differs in Native and Non-native Populations of *Conyza canadensis* L. **Frontiers in Ecology and Evolution.** 03 February 2022.
7. S Ahmad, V Cote, X Cheng, G Bourriquen, V Sapountzi, **Altaf M,** J Cote. Antagonistic relationship of NuA4 with the Non-Homologous End-Joining machinery at DNA damage sites. **PLOS GENETICS.** 17(9): e1009816, 2021
8. US Mir, A Bhat, A Mushtaq, S Pandita, **Altaf M,** TK Pandita. Role of Histone acetyltransferases MOF and Tip60 in Genome Stability. **DNA Repair.** 2021 Aug 8;107:103205.
9. Banday S, Pandita RK, Mushtaq A, Bacolla A, Mir US, Singh DK, Bhat KP, Hunt CR, Ganesh Rao, Charaka VK, Tainer JA, Pandita TK and **Altaf M.** Autism-associated vigilin depletion impairs DNA damage repair. **Molecular and Cellular Biology,** 23 June 2021.
10. A Mushtaq, US Mir, CR Hunt, S Pandita, WW Tantray, A Bhat, RK Pandita, **Altaf M,** Pandita TK. Role of Histone Methylation in Maintenance of Genome Integrity. **Genes.** 2021. PMID: 34209979.
11. S Nisar, RA Dar, **Altaf M,** Z Farooq, I Tahir. Some important biochemical changes orchestrating flower development and senescence in *Nicotiana glauca* Viv. and *Petunia hybrida* Vilm. flowers., **The Journal of Horticultural Science and Biotechnology,** 1-11, 2021.
12. Banday S, Farooq Z, Ganai SA and **Altaf M.** Therapeutic strategies against hDot1L as a potential drug target in MLL-rearranged leukemias. **Clinical Epigenetics,** 2020 May 25;12(1):73
13. Farooq Z, Abdullah E, Banday S, Ganai SA, Rashid R, Mushtaq M, Rashid S and **Altaf M.** Vigilin protein Vgl1 is required for heterochromatin mediated gene silencing. **Journal of Biological Chemistry,** Sep 26, 2019.
14. Sengoden, M.; **Bhat, G. A*** Tristan, R, Hsieh, C.; Darensbourg, D. J Facile Synthesis of Polycarbonates from Biomass-Based Eugenol: Catalyst Optimization for Selective Copolymerization of CO₂ and Eugenol to Achieve Polycarbonates, **RSC Sustain.,** 2024, DOIhttps://doi.org/10.1039/D4SU00145A.
15. Hassan, M., **Bhat, G.A.** and Darensbourg, D. J., Post-polymerization functionalization of aliphatic polycarbonates using click chemistry. **Polym. Chem.,** 2024
16. Bhat, S.; Aasif, M.; Ahmad, M.; Khurshaid, F.; Yatoo, G. N.; Rather, Z.-U. K.; Bhat, G. A*.; Banday, J*.; Wahid, M.* **ACS Sustain. Chem. Eng.** 2024, 12, 141-153.
17. Sengoden, M.; **Bhat, G. A*.**; Rutledge, R.J., Rashid, S.; Dar, A.A.; Darensbourg, D. J*., Micellar Catalysis: Polymer Bound Palladium Catalyst for Carbon- Carbon Coupling Reactions in Water. **Proc. Natl. Acad. Sci.** 2023, 120, e2312907120.

18. Wei, P.; **Bhat, G. A***; Darensbourg, D. J*, Enabling New Approaches: Recent Advances in Processing Aliphatic Polycarbonate-Based Materials. *Angew. Chem. Int. Ed.*, 2023, 62, e202307507
19. Bhat, G.A*.; Darensbourg, D.J*, Coordination complexes as catalysts for the coupling reactions of oxiranes and carbon dioxide. *Coord. Chem. Rev.* 2023, 492, 215277
20. Sengoden, M.; **Bhat, G. A***; Darensbourg, D. J*, Sustainable Synthesis of CO₂-derived Polycarbonates from the Natural Product, Eugenol: Terpolymerization with Propylene Oxide. *Macromolecules* 2023, 56, 2362–2369
21. Hassan, A.; Anis, I.; Shafi, S.; Assad, A.; Rasool, A.; Khanam, R.; **Bhat, G. A.**; Krishnamurty, S.; Dar, M. A. First-Principles Investigation of the Electrocatalytic Reduction of CO₂ on Zirconium-Based Single-, Double-, and Triple-Atom Catalysts Anchored on a Graphitic Carbon Nitride Monolayer. *ACS Applied Nano Materials* 2022, 5, 15409-15417
22. Sengoden, M.; **Bhat, G. A***; Darensbourg, D. J*, Bifunctional organoboron–phosphonium catalysts for coupling reactions of CO₂ and epoxides. *RSC Adv.*, 2022, 12, 32440-32447
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24. **Bhat, G.A***; Darensbourg, D.J*, Progress in the Catalytic Reactions of CO₂ and Epoxides to Selectively Provide Cyclic or Polymeric Carbonates. *Green Chem.* 2022, 24, 5007-50034
25. Anis, I.; Dar, M. S.; **Bhat, G. A***; Rather, G. M.; Dar, M. A., Probing the Site-Specific Reactivity and Catalytic Activity of Ag_n (n = 15–20) Silver Clusters. *ACS Omega* 2022, 23, 19687-19693
26. Sengoden, M.; **Bhat, G. A***; Darensbourg, D. J*, Explorations into the Sustainable Synthesis of Cyclic and Polymeric Carbonates and Thiocarbonates from Eugenol-Derived Monomers Reactions with CO₂, COS, or CS₂. *Green Chem.* 2022, 24, 2535-2541.
27. **Bhat, G. A.**; Rashad, A. Z.; Ji, X.; Quiroz, M.; Fang, L.; Darensbourg, D. J.; TEMPO Containing Radical Polymonothiocarbonate Polymers with Regio- and Stereo-Regularities: Synthesis, Characterization, and Electrical Conductivity Studies *Angew. Chem. Int. Ed.*, 2021, 60, 20734-20738.
28. Verma, S; **Bhat, G. A**; Murugavel, R*, Cyclopentadienyl Removal Assisted Nuclearity Expansion in Thermolabile Titanium and Zirconium Organophosphates Sourced from Metallocene Dichlorides *J. Organomet. Chem.*, 2021, 932, 121642.
29. **Bhat, G.A.**; Darensbourg, M.Y.; Darensbourg, D.J*, Copolymerisation of Propylene Oxide and 13CO₂ to Afford Completely Alternating Regioregular 13C-Labelled Poly(propylene carbonate). *Polymer Journal* 2021, 53, 215-218.
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31. **Bhat, G. A.**; Luo, Ming.; Darensbourg, D. J*, Catalysis of Carbon Dioxide and Oxetanes to Produce Aliphatic Polycarbonates *Green Chem.*, 2020, 22, 7707-7724.
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33. Bhat, YA, **Bhat, JY**, Amin, S, Udgaonkar, JB and Wani AH. HDX-MS reveals conformational dynamics of chromatin remodeler ISWI in restingstate and during nucleosome sliding. *bioRxiv*, doi.org/10.1101/2023.07.30.549839
34. Alhamoudi KM, **Bhat J**, Nashabat M, Alharbi M, Alyafee Y, Asiri M, Umair M, Alfadhel M, (2020) A Missense Mutation in the UGDH Gene Is Associated With Developmental Delay and Axial Hypotonia. *Front Pediatr.* 27;8:71. doi:10.3389/fped.2020.00071.
35. Sharma A, **Mir R**, Galande S. Epigenetic Regulation of the Wnt/β-Catenin Signaling Pathway in Cancer. *Front Genet.* 2021. doi: 10.3389/fgene.2021.681053.