Cationic-Palladium Catalyzed Regio- and Stereoselective Dicarbofunctionalization of Unsymmetrical Alkynes

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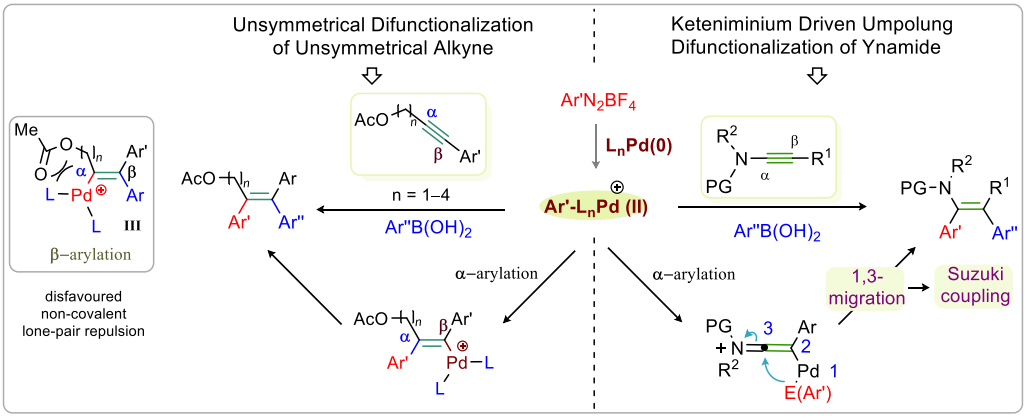
Abstract:

Presented here is the discovery of a regio- and stereoselective *syn*-1,2-dicarbofuctionalization of unsymmetrical internal alkynes. A cationic Pd-catalyzed three-component coupling of aryl diazonium salts and aryl boronic acids (or olefins) with unsymmetrical alkynes enables access to tetra-substituted unsymmetrical olefins. Density functional theory (DFT) studies rationalize the selectivity of the reaction. Synthetic versatility of the carboxylate and amino bearing highly-substituted olefins is also presented.



References and Notes:

1. Dutta, S.; Yang, S.; Vanjari, R.; Mallick, R. K.; Gandon, V.; Sahoo, A. K. *Angew. Chem. Int. Ed.* **2020**, *59*, 10785 –10790
2. Dutta, S.; Shandilya, S.; Yang, S.; Gogoi, M. K.; Gandon, V.; Sahoo, A. K. (Manuscript Communicated)

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Career:
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Scientific activities:
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-Synthesis of fused-π-conjugated heterocycles relevance to pharmaceutical importance and materials.
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Awards:
- Fellow of Indian Academy of Sciences (FASc)-2021
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- Prof. D. K. Banerjee Memorial Lecture Award 2012, by the Department of Organic Chemistry, IISc, Bangalore.
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[**h Index = 37**; **i10 Index = 67;** Google Scholar as on 02/12/2021]

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