technische universität dortmund

Einladung

Im Rahmen der gemeinsamen Kolloquien der Fakultät für Chemie und Chemische Biologie der Technischen Universität Dortmund hält

Herr Prof. Dr. Masilamani Jeganmohan

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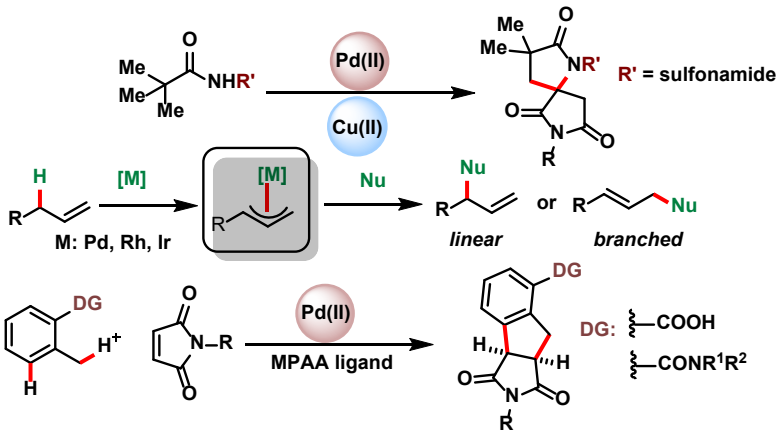
einen Vortrag mit dem Thema:

Metal-Catalyzed Aliphatic, Allylic and Benzylic C-H Functionalization Reactions

Transition metal-catalyzed functionalization of relatively dormant C(sp^3) –H bonds have gained profound importance in chemical building blocks. In this context, aliphatic C(sp^3) –H bonds are comparatively challenging in nature due to their intrinsic inertness and functionalizing such inert C–H bonds to build bioactive molecules has been a captivating concept among the researchers. The activation of aliphatic C–H bonds in various molecules has mainly been performed by palladium catalysis and assisted by several directing-groups.[1] In parallel, catalytic annulation *via* double C–H activation is now recognized as one of the most attractive methods to construct complex frameworks.[2] It will be impressive for carrying out annulation reactions that proceed via the activation of both a primary benzylic C(sp^3) –H bond and a meta- C(sp^2) –H bond by using a weak directing group. On the other hand, Transition-metal complexes of Pd(II), Rh(III) and Ir(III) have emerged as an efficient catalyst for linear/branched selective allylic C–H functionalization of terminal and internal alkenes, respectively.[3] In this talk, I would like to present our observation on transition metal-catalysed aliphatic, allylic C–H functionalization reactions with various coupling partners and annulation reaction via dual C–H bond activation.



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References and Notes:

1. (a) Liu, B.; Romine, A. M.; Rubel, C. Z.; Engle, K. M.; Shi, B. F. *Chem. Rev.*, **2021**, *121*, 14957–15074. (b) Shi, Z. J.; Li, B. J.; Li, H. *Catal. Sci. Technol.*, **2011**, *1*, 191-206. (c) Dutta, A.; Jeganmohan, M. *Org. Lett.*, **2023**, *25*, 6305−6310.
2. (a) Minami, Y.; Hiyama, T. *Tetrahedron Lett.,* **2018**, *59*, 781. (b) Shi, Z.; Ding, S.; Cui, Y.; Jiao, N. *Angew. Chem. Int. Ed.,* **2009**, *48*, 7895. (c) Naskar, G.; Jeganmohan, M. *Chem. Eur. J.*, **2022**, *28*, e2022007. (d) Naskar, G.; Jeganmohan, M. *Org. Lett.,* **2023**, *25*, 2190.
3. (a) Sihag, P.; Chakraborty, T.; Jeganmohan, M. *Org. Lett.,* **2023**, *25*, 1257. (b) Keerthana, M. S.; Jeganmohan, M. *Chem. Commun*., **2022**, *58*, 8814–8817. (c) Naskar, G.; Jeganmohan, M. *Org. Lett*., **2024**, *26*, 6580–6585. (d) Chakraborty, T.; Jeganmohan, M. *Org. Lett*., **2025**, *27*, 3521.

Zeit: Dienstag, 27.05.2025, um 17.15 Uhr

Ort: Hörsaal 1, Chemiegebäude, Campus Nord

Im Anschluss an den Vortrag findet eine Nachsitzung statt.

Für die Dozenten der Chemie
Im Auftrag des Dekans

Betreuer: Prof. Dr. M. Hansmann