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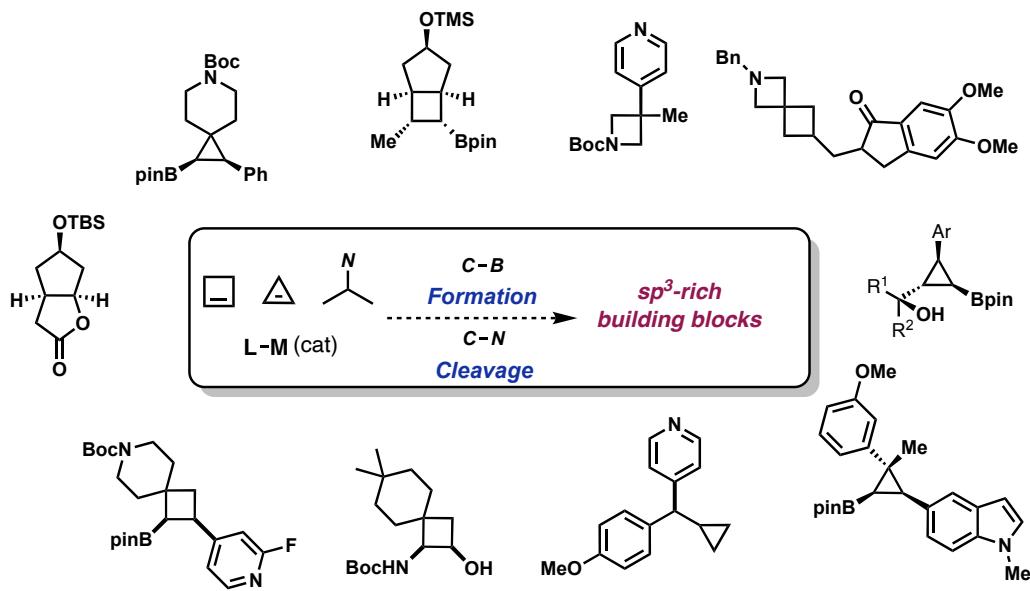
Catalysis to increase complexity: stereoselective synthesis of sp³-rich building blocks

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Transition metal catalysis is a powerful tool for the creation of stereocenters in organic molecules. Both, the use of a chiral catalyst or a chiral starting material, are valuable and complementary approaches to accomplish this goal. In our group, we have recently focused on the development of metal-catalyzed enantioselective and stereospecific transformations for the preparation of sp³-rich building blocks, providing tools for stereodefined carbon-boron bond formation and selective carbon-nitrogen bond cleavage. These methods have allowed us to prepare a broad variety of useful synthetic intermediates, with special emphasis on the synthesis of functionalized small rings.¹ Some of these transformations will be presented in this talk.



References

- Selected references: a) Teresa, J.; Velado, M.; Fernández de la Pradilla, R.; Viso, A.; Lozano, B.; Tortosa, M. *Chem. Sci.* **2023**, *14*, 1575. (b) Nóvoa, L.; Trulli, L.; Parra, A.; Tortosa, M. *Org. Lett.* **2021**, *23*, 7434. (c) Nóvoa, L.; Trulli, L.; Parra, A.; Tortosa, M. *Angew. Chem. Int. Ed.* **2021**, *60*, 11763. (d) Amenós, L.; Trulli, L.; Núvoa, L.; Parra, A.; Tortosa, M. *Angew. Chem. Int. Ed.* **2019**, *58*, 3188. (e) Guisan-Ceinos, M.; Parra, A.; Martín-Heras, V.; Tortosa, M. *Angew. Chem. Int. Ed.* **2016**, *55*, 6969



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