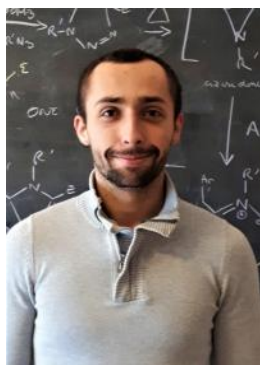


# A SMALL RING INTO THE BIGGER PICTURE



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Benzocyclobutenes (BCBs) derivatives are of significant interest due to the cooperative effects between the thermodynamic stability coming from the aromatic ring and the high reactivity of the strained cyclobutene moiety. In this regard, BCBs have been used as an original building block for the synthesis of natural products<sup>1</sup> and also as precursors for the development of polymers.<sup>2</sup>

On the other hand, small rings represent a valuable three-atoms building element in the search to reach molecular complexity in an atom economical manner and often participate in fascinating chemical transformations.<sup>3</sup> This release of ring tension usually allows for a scalable, rapid and controlled synthetic access to the expected target molecules.

In this context, a new class of donor-acceptor cyclopropanes DACs **1** has recently been developed in our laboratory combining a silyl protected cyclopropanol with an  $\alpha,\beta$ -unsaturated ester. Gratifyingly, the latter delivered the corresponding highly functionalized benzocyclobutenes **2** in good yields.

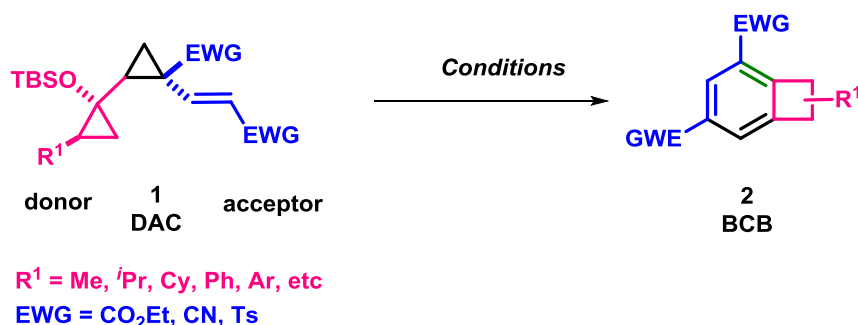


Figure 1: Cascade reaction from donor-acceptor cyclopropane to benzocyclobutene

Strategies, synthesis of precursors, scope and limits of the reaction and mechanistic studies will be described and discussed.

## References

<sup>1</sup> T. Kametani, M. Kajiwara, K. Fukumoto, *Tetrahedron*, **1974**, *30*, 1053-1058.

<sup>2</sup> a) G. Mehta, S. Kotha, *Tetrahedron*, **2001**, *57*, 627-634. b) X. Wei, H. Hu, X. Li, Q. Yin, L. Fan, Y. Huang, J. Yang, *J. Appl. Polym. Sci.*, **2019**, *136*, 47458.

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