

## “Azalevoglucozan”, a useful synthon in iminosugar chemistry

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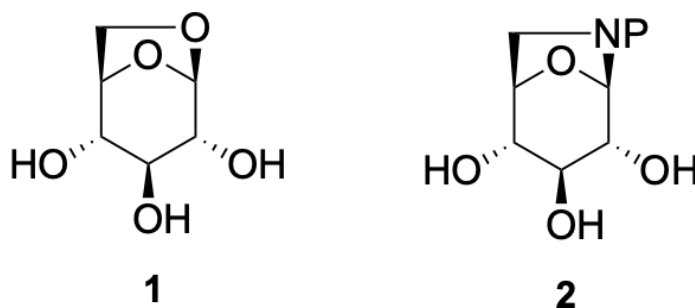
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Levoglucozan **1** [1], 1,6-anhydroglucopyranose, has been extensively used in carbohydrate chemistry to access a wide range of glycosyl donors and acceptors, notably exploiting Cerny epoxide. The masked C1 and C6 positions in levoglucozan allow to modify the free hydroxyl groups at C2, C3 and C4 to access a wide range of derivatives.[2] In addition, ring opening of the 1,6-anhydro bridge is a convenient way to stereoselectively introduce functional groups at C1 while freeing the C6 position.[3]

Replacement of the oxygen atom in the 1,6 anhydro bridge by a nitrogen atom to produce “azalevoglucozan” **2** is scarce in the literature.[4] In the last decade, our group has exploited such scaffold to access various iminosugars through hemiaminal opening and skeletal rearrangement.[5]

Capitalizing on this chemistry, we will present our last results concerning the interconversion of the hydroxyl groups in azalevoglucozan **2** to access unprecedented iminosugars.



### Bibliographic references:

- [1] R. Wojcieszak et al. (2020), *Green Chem.* (22) 5859-5880.
- [2] S. Arndt, L. C.Hsieh-Wilson (2003), *Org. Lett.* (5) 4179-4182.
- [3] D. Hazelard, P. Compain (2021) *Eur. J. Org. Chem.* (2021) 3501 – 3515.
- [4] D. Lafont, A. Wollny, P. Boullanger (1998) *Carbohydr. Res.* (310) 9-16.
- [5] M. Mondon et al. (2012) *Org. Lett.* (14) 870-873; N. Fontelle et al. (2018) *Eur. J. Org. Chem.* 5477-5488.