Radical cyclizations of α-oxy carbon centered radicals

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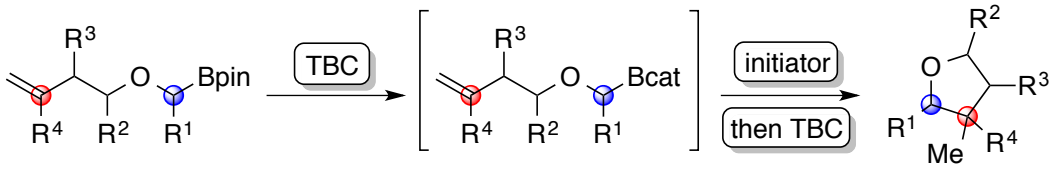
Oxolanes are ubiquitous in natural products and have long been an important class of bioactive heterocycles.[1] These oxacycles are readily accessible via radical cyclization reactions. Despite their importance, only a few papers have reported the cyclization of α-oxy carbon centered radicals, with a majority involving tin reagents.[2,3] Herein, we report a tin-free procedure to generate these radicals that uses air-stable organoboranes as precursors for the rapid construction of decorated oxolane derivatives.



This strategy involves the *in-situ* formation of α-oxy catecholboronic ester intermediates to side-step tricky isolations.[4,5] Full details of the method will be disclosed, such as the application to the synthesis of di-, tri- and tetrasubstituted oxolane derivatives, in good to high yields and diastereoselectivities.

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