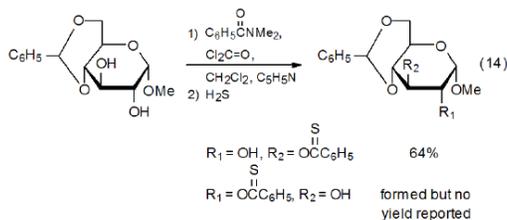
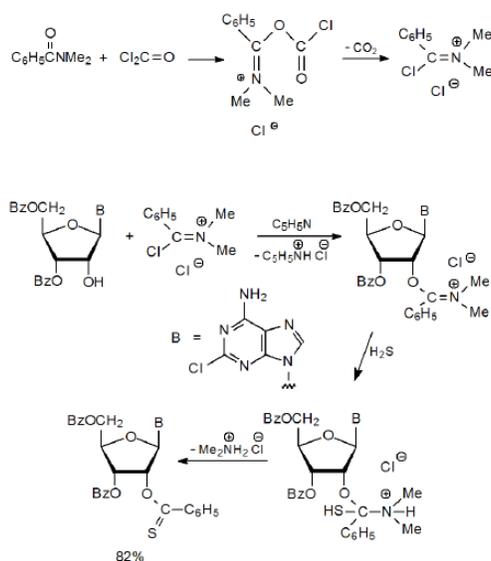


VI. Thionoesters

The standard synthesis of thionoesters is shown in eq 14. Scheme 12, which contains a more detailed picture of this sequence, includes a proposed mechanism for this reaction.¹ Although this method of thionoester preparation is effective, it requires handling the toxic gases phosgene and hydrogen sulfide.²⁷ This added difficulty in preparation is a factor in thionoesters being used less frequently than other, *O*-thiocarbonyl carbohydrate derivatives.

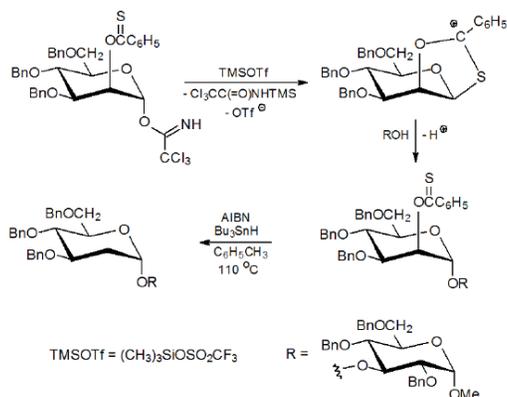


Scheme 12



Thionobenzoates are used for radical formation more often than other thionoesters. Although conditions for preparation of thionobenzoates make them less attractive starting materials than other *O*-thiocarbonyl compounds, these esters become more desirable reactants if the *O*-thiobenzoyl group has an additional role in the reaction. In the transformation shown in Scheme 13 the 2-*O*-thiobenzoyl group anchimerically assists glycoside formation prior to participating in radical reaction.^{60,61}

Scheme 13



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