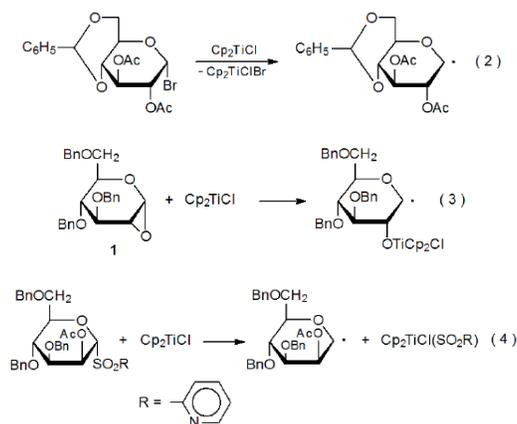


II. Reactions

Three types of carbohydrate derivatives form carbon-centered radicals upon reaction with Cp_2TiCl . Halogen-atom abstraction from glycosyl halides produces furanos-1-yl and pyranos-1-yl radicals.^{1,4-11} Radicals also can be generated by abstractive ring opening of epoxides.¹²⁻¹⁹ Finally, Cp_2TiCl produces pyranos-1-yl radicals when it reacts with glycosyl 2-pyridyl sulfones.⁷ An example of the first type of reaction is found in eq 2,^{5,6} one of the second type in eq 3,¹⁶ and one of the third in eq 4.⁷ These radical-forming reactions have the attractive, chemoselective feature that Cp_2TiCl does not affect acetal, ester, or silyl ether protection.^{5,6}



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