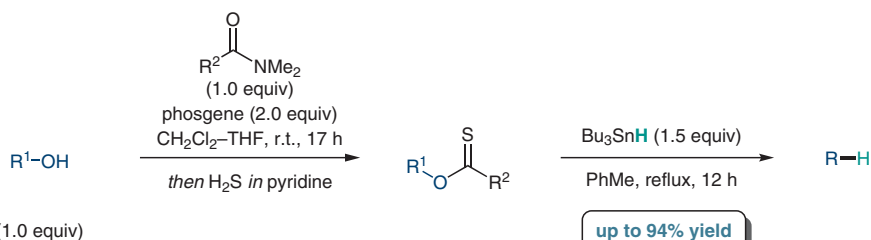


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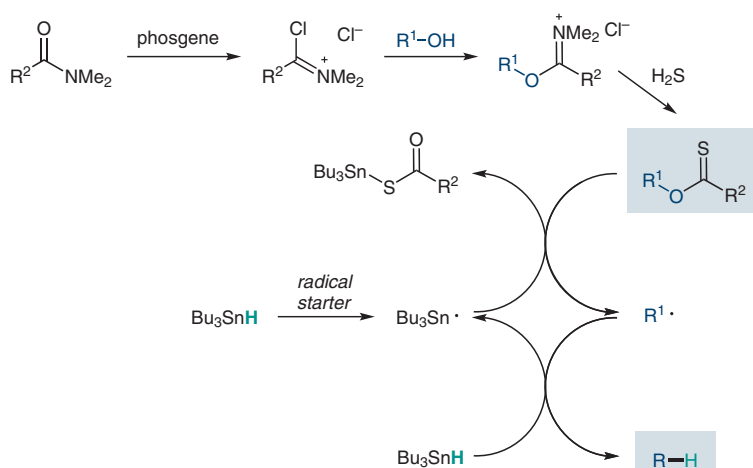
A New Method for the Deoxygenation of Secondary Alcohols

*J. Chem. Soc., Perkin Trans. 1* **1975**, 16, 1574–1585.

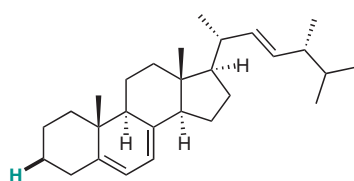
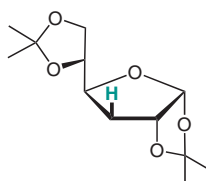
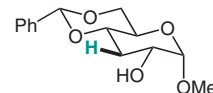
# Radical-Driven Deoxygenation of Secondary Alcohols: The Barton–McCombie Reaction

 $R^1 = \text{Alk (sec)}$  $R^2 = \text{H, Me, SMe, OMe, Ph, OPh, imidazolyl}$ 

Proposed mechanism:



Selected examples:

67% yield  
from ergosterol85% yield  
from  $\alpha$ -D-glucofuranose70% yield  
from  $\alpha$ -D-glucopyranoside

**Significance:** The authors reported a very broadly applicable method for the deoxygenation of secondary alcohols, providing complex hydrocarbons in high yields. The alcohol thereby has to be activated by transforming it into its corresponding thioester.

**Comment:** By using a radical mechanism and the favorable formation of an S–Sn bond, these thioesters can be deoxygenated. This concept has been revived in the Barton–McCombie decarboxylation (*J. Chem. Soc., Chem. Commun.* **1980**, 15, 732).

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