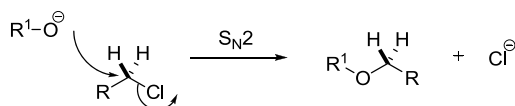
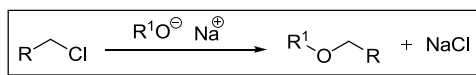
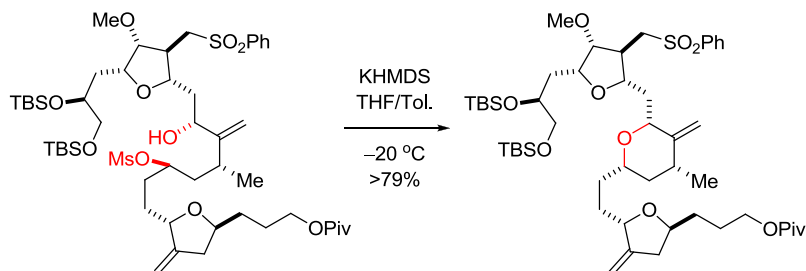


## Williamson ether synthesis

Ether from the alkylation of alkoxides by alkyl halides. In order for reaction to go smoothly, the alkyl halides are preferred to be primary. Secondary halides work as well sometimes, but tertiary halides do not work at all because E<sub>2</sub> elimination will be the predominant reaction pathway.



### Example 1, Cyclic etherification<sup>9</sup>



## References

1. Williamson, A. W. *J. Chem. Soc.* **1852**, 4, 229–239. Alexander William Williamson (1824–1904) discovered this reaction in 1850 at University College, London.
2. Dermer, O. C. *Chem. Rev.* **1934**, 14, 385–430. (Review).
3. Freedman, H. H.; Dubois, R. A. *Tetrahedron Lett.* **1975**, 16, 3251–3254.
4. Jursic, B. *Tetrahedron* **1988**, 44, 6677–6680.
5. Tan, S. N.; Dryfe, R. A.; Girault, H. H. *Helv. Chim. Acta* **1994**, 77, 231–242.
6. Silva, A. L.; Quiroz, B.; Maldonado, L. A. *Tetrahedron Lett.* **1998**, 39, 2055–2058.
7. Peng, Y.; Song, G. *Green Chem.* **2002**, 4, 349–351.
8. Stabile, R. G.; Dicks, A. P. *J. Chem. Educ.* **2003**, 80, 313–315.
9. Austad, B. C.; Benayoud, F.; Calkins, T. L.; et al. *Synlett* **2013**, 17, 327–332.