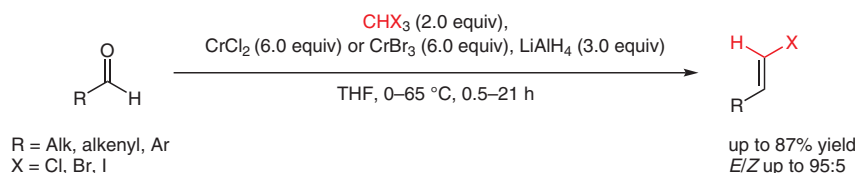


K. TAKAI*, K. NITTA, K. UTIMOTO (KYOTO UNIVERSITY, JAPAN)

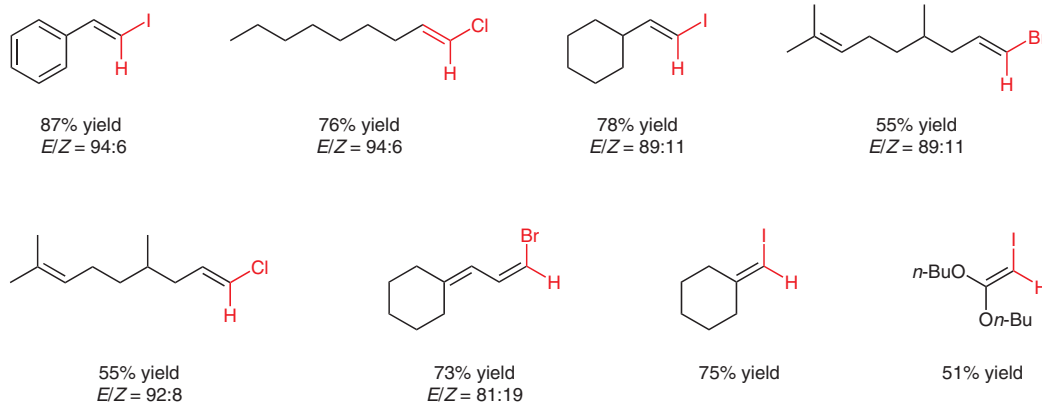
Simple and Selective Method for Aldehydes (RCHO) → (*E*)-Haloalkenes (RCH:CHX) Conversion by means of a Haloform-Chromous Chloride System

J. Am. Chem. Soc. **1986**, *108*, 7408–7410.

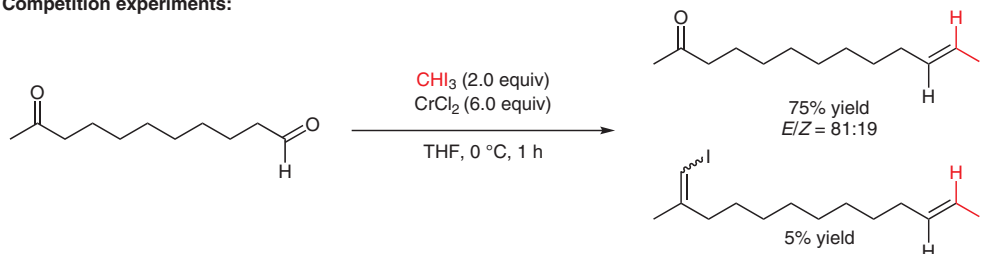
The Takai Olefination: Simple Access to *E*-Alkenyl Halides



Selected examples:



Competition experiments:



Significance: In 1986 Takai and co-workers developed a simple procedure for the stereoselective preparation of *E*-alkenyl halides from various aldehydes by using an excess of CrCl_2 together with a haloform. The selectivity was dependent on the corresponding haloform and decreased in the order $\text{Cl} > \text{Br} > \text{I}$.

Comment: The mild reaction conditions enable highly chemoselective transformations. Thus, the olefination of an aldehyde proceeds smoothly in the presence of ketone moieties. Given the unique chemo- and stereoselectivity, several modifications and improvements of this method have been published over the years.