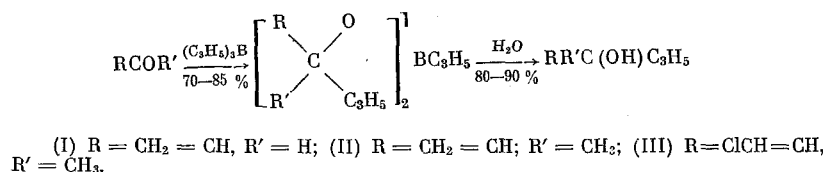


B. M. Mikhailov, G. S. Ter-Sarkisyan,
and N. A. Nikolaeva

UDC 542.91+547.244

α,β -Unsaturated aldehydes and ketones (acrolein, methyl vinyl ketone, and methyl β -chlorovinyl ketone) react with triallylboron to form esters of allylboronic acid (I-III)



Compound (I) has bp 87-89°C (4 mm); n_D^{20} 1.4530; compound (II) bp 84-85°C (5 mm); n_D^{20} 1.4629; and compound (III) bp 111-114°C (1 mm); n_D^{20} 1.4862. The hydrolysis of esters (I)-(III) smoothly gave the following products, respectively: hexa-1,5-dien-3-ol, 3-methylhexa-1,5-dien-3-ol, and 1-chloro-3-methylhexa-1,5-dien-3-ol [bp 66-67°C (10 mm); n_D^{20} 1.4780].

With triallylboron β -cyclocitral gives 1-(2,6,6-trimethylcyclohex-1-enyl)but-3-en-1-yl borate, the saponification of which yields 1-(2,6,6-trimethylcyclohex-1-enyl)but-3-en-1-ol, bp 91-93°C (3 mm), n_D^{20} 1.4950. *n*-Tributylboron adds to methyl vinyl ketone in the 1,4 position with the formation of oct-2-en-2-yl di-*n*-butylborinate (V) with bp 100-103°C (1.5 mm); n_D^{20} 1.4300. Found%: C 76.06; H 13.15; B 4.57. $\text{C}_{16}\text{H}_{23}\text{BO}$. Calculated%: C 76.13; H 13.18; B 4.36. The hydrolysis of (V) gives *n*-hexyl methyl ketone.