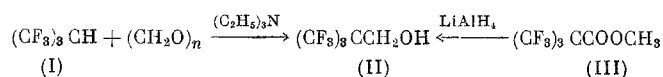


HYDROXYMETHYLATION AND AMINOMETHYLATION OF 2-MONOHYDROPERFLUOROISOBUTANE

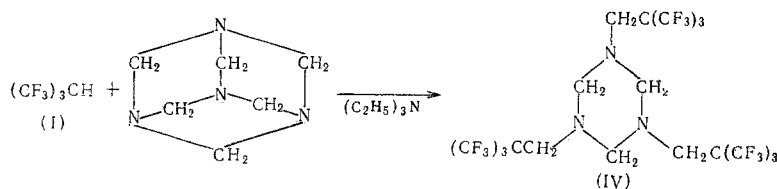
S. T. Kocharyan, E. M. Rokhlin,
Yu. A. Cheburkov, and I. L. Knunyants

UDC 542.91+547.221

It was shown by us that the gamut of the reactions of 2-monohydroperfluoroisobutane (I) involving the active methine group [1,2] can be expanded. Thus, the reaction of (I) with a slight excess of paraform and 0.2 mole of triethylamine (55 h, at 100°) gave perfluoro-tert-butylcarbinol (II), which was also synthesized from the methyl ester of perfluoropivalic acid (III); m.p. of (II) = 105°. Found %: C 24.00; H 1.23. $C_5H_3F_9O$. Calculated %: C 24.00; H 1.20. Phenylurethane, m.p. 77.5–78.5° (hexane). Found %: F 46.18; N 3.79. $C_{12}H_8F_9NO_2$. Calculated %: F 46.34; N 3.79.



The reaction of (I) with excess hexamethylenetetramine in the presence of 1.1 moles of triethylamine for 27 h at 100° gave 1,3,5-tris-(perfluoro-tert-butyl)hexahydro-symm-triazine (IV) in 24% of the theoretical yield, m.p. 150–151° (CCl_4). Found %: C 27.25; H 1.52; F 66.14; N 5.40. $C_{18}H_{12}F_{27}N_3$. Calculated %: C 27.58; H 1.53; F 65.52; N 5.36. NMR spectrum: δ 3.2 p.p.m. (singlet, CH_2 in the side chain), δ 3.6 p.p.m. (singlet, CH_2 in the ring).



LITERATURE CITED

1. I. L. Knunyants, S. T. Kocharyan, and E. M. Rokhlin, *Izv. AN SSSR Ser. khim.*, **1966**, 1057.
2. S. T. Kocharyan and G. D. Kolomnikova, *Izv. AN SSSR, Ser. khim.*, **1966**, 1288.