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The Reaction of Nitrogen Trichloride with Various Types of Olefine Hydrocarbons

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out, the best yields being obtained at about —20°C. At temperatures much below this, the reaction is very slow. The yields are better with carbon tetrachloride as the solvent than with the other solvents used.

Acetylene hydrocarbons react with nitrogen trichloride forming nitrogen and ammonium chloride. Only traces of an amine are obtained.

STATE UNIVERSITY OF IOWA.

THE REACTION OF NITROGEN TRICHLORIDE WITH VARIOUS TYPES OF OLEFINE HYDROCARBONS

G. H. COLEMAN, A. W. CAMPBELL, AND G. M. MULLINS

(ABSTRACT)

With styrene nitrogen trichloride forms 1-chloro-2-phenyl-2-dichloroamino-ethane. When dry HCl is passed into a carbon tetrachloride solution of this compound 1-chloro-2-phenyl-2-amino-ethane and free chlorine are formed. Propene gives an analogous addition compound having similar properties. 2-Methyl propene and nitrogen trichloride react very rapidly to form ammonium chloride, nitrogen and chlorinated hydrocarbons. No stable addition product is formed in this reaction.

STATE UNIVERSITY.

DECOMPOSITION OF HYDROGEN BROMIDE BY SILENT ELECTRIC DISCHARGE

J. J. CANFIELD WITH ANSON HAYES

(ABSTRACT)

Very few equilibria of gases under the influence of the silent electric discharges have been determined although a considerable number of experiments are recorded in the literature regarding its effect on certain reactions. In order to obtain more data on the chemical effect of the discharge through gases, so that generalizations of the action might be made, the gaseous equilibrium $2HBr \rightarrow H_2 + Br_2$ was determined. Equilibrium at 33°C and atmospheric pressure, using 10,000 to 15,000 volts, was reached with 33.5% HBr, 33.25% H_2 and 33.25% Br_2 present in the mixture. According to the best heat capacity data available and assuming no appreciable dissociation of Br_2 to 2Br, the above

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