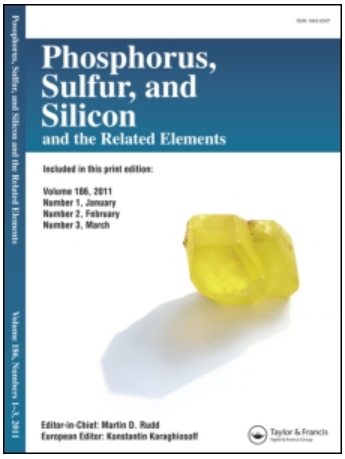

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New Aspects of Synthesis of the Compounds with P-C Bonds

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NEW ASPECTS OF SYNTHESIS OF THE COMPOUNDS WITH P-C BONDS

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Industrial realization of practically useful compounds with P-C bonds is restrained by lack of simple methods of their production. The use of tri(2-chloroethyl)phosphite and its transformation products for binding aluminium chloride in reactions of phosphorus trichloride with arenes has allowed to improve aryldichloro- and diarylchlorophosphines synthesis methods, as the indicated bases form with $AlCl_3$ liquid complexes which do not mix with the expected product. Complexones have also been successfully used in the synthesis of organylphosphonyl- and -thionophosphonyldichlorides. New agents of converting adducts of unsaturated compounds and phosphorus pentachloride into organyldichlorophosphonates (aldehydes, ketones, acetyles, ethers and salts of carboxylic acids, α-oxides, N-oxides, hexamethyldisiloxane) have been found. Isoalkylallylethers are shown to react with PCl_5 in two directions producing $i\text{-PrOCH=C(CH}_2\text{Cl)P(O)Cl}_2$ and $CH_2\text{=CH-CH}_2\text{OC(CH}_3\text{)=CHP(O)Cl}_2$. Alkylmetallylethers react under mild conditions with PCl_5 at the double bond, at 30°C dealkoxylation takes place resulting in dichloroanhydride $ClCH_2C(CH_3)=CHP(O)Cl_2$. Allyl- and propargylacetales undergo phosphonylation exceptionally at the vinyl group generated during a reaction. Original phosphorus-containing ethers, acetales, cyclical aldehydes, aromatic nitro-, amino-, hydroxycompounds, and phosphorus-containing azodyes have become accessible as a result of the studied transformations.