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Silicon, Boron and Arsenic Derivatives of Phosphorus(IV) Thioacids in Synthesis of Novel Organothiophosphorus Compounds

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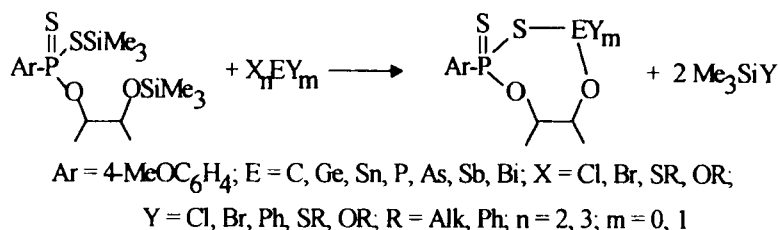
Silicon, Boron and Arsenic Derivatives of Phosphorus(IV) Thioacids in Synthesis of Novel Organothiophosphorus Compounds

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We have found that S-boron O-alkyl(aryl)dithiophosphonates react with organic substances containing reactive multiple bonds such as methyl acrylate, vinyl butyl ether, vinyl acetate under mild conditions to form products of insertions into the S-B bond. The similar results were obtained in the case of S-arsenic O-alkyl(aryl)dithiophosphonates.

New types of seven and eight membered phosphacyclanes containing endocyclic fragment P-S-E (E = C, Si, Ge, Sn, P, As, Sb, Bi) were synthesized in the reactions of disilyl dithio- and trithiophosphonates with halides, alkoxides, phenoxides and mercaptides of main groups IV and V elements.



Their spectral, structural and physical properties have been studied.