

Caged phosphorane with P-C bond based on chloral and 4,5-dimethyl-2-(2-oxo-1,2-diphenylethoxy)-1,3,2-dioxaphospholane

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Abstract

© 2015 Pleiades Publishing, Ltd. The key methods of caged phosphoranes synthesis are analyzed. Reaction of 4,5-dimethyl-2-(2-oxo-1,2-diphenylethoxy)-1,3,2-dioxaphospholane (prepared from the meso-form of 2,3-butanediol) with chloral has yielded the caged phosphorane containing a phosphorus-carbon bond: 1,1-(1,2-dimethylethylenedioxy)--,4-diphenyl-6-trichloromethyl-2,5,7,1-trioxaphosphabicyclo[2.2.11,4]heptane; spatial structure of the product has been elucidated with X-ray diffraction analysis.

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Keywords

1-hydroxyphosphonate, caged phosphorane, cascade reaction, chloral, dioxaphospholane