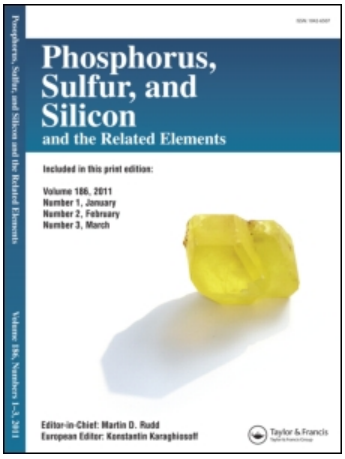

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Synthesis and Crystal Structure of 2-R-2,5-Dioxo-5,6-benzo-1,4,2- and -1,3,2-Dioxaphosphepines

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SYNTHESIS AND CRYSTAL STRUCTURE OF 2-R-2,5-DIOXO-5,6-BENZO-1,4,2- AND −1,3,2-DIOXAPHOSPHEPINES

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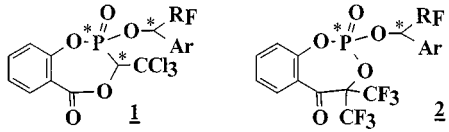
2-R-4-oxo-5,6-benzo-1,3,2-dioxaphosphorinanes [R = OCH(R_F)Ar], containing two chiral centers (phosphorus and carbon in the substituent R) easily react with chloral and hexafluoroacetone and form diastereoisomeric 2-R-2,5-dioxo-5,6-benzo-1,4,2- and −1,3,2-dioxaphosphepines **1**, **2** respectively. The reaction with chloral has a high regio- and stereoselectivity (two diastereoisomers are obtained from starting two diastereoisomers). The individual isomers were isolated and examined by NMR and single crystal x-ray diffraction in all cases. The heterocycle of the phosphepine molecules has a distorted boat conformation. The exocyclic alkoxy substituent is axial, phosphoryl and CCl_3 groups are equatorial.



1 **2**

R_F = CF_3, C_3F_7, C_6F_{11}, Ar = Ph, 3-ClC_6H_4, 3-$CF_3C_6H_4$, 3-$MeOC_6H_4$

SCHEME 1

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