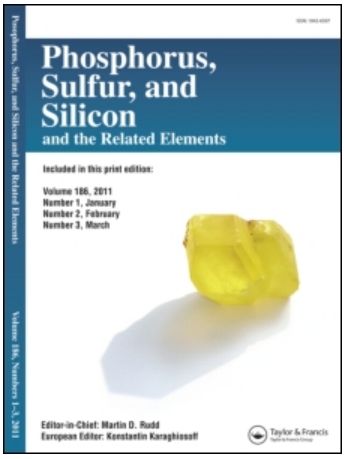

Phosphorus, Sulfur, and Silicon and the Related Elements

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Reactions of 2-R-4-Oxo-5,6-benzo-1,3,2-dioxaphosphorinanes with Perfluorodiacetyl

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REACTIONS OF 2-R-4-OXO-5,6-BENZO-1,3,2-DIOXAPHOSPHORINANES WITH PERFLUORODIACETYL

Gulnara A. Ivkova,[a] *Vladimir F. Mironov,*[b] *Irina V. Konovalova,*[a] *El Vira R. Zagidullina,*[a] *Arkady N. Pudovik,*[a] *and Mikhail A. Kurykin*[c]
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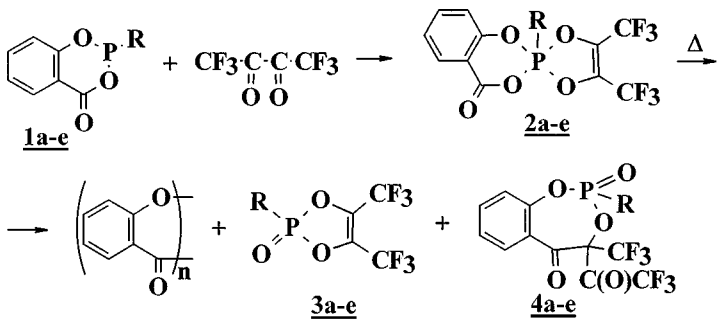
2-R-4-Oxo-5,6-benzo-1,3,2-dioxaphosphorinanes **1a–e** react with perfluorodiacetyl under mild conditions and form pentacoordinated phosphorus derivatives—λ^5-1,3,2-dioxaphospholenes **2a–e** with high yields. Spirophosphoranes are relatively stable and their structure is confirmed by ^{1}H, ^{13}C, ^{19}F, ^{31}P NMR, IR spectroscopy, and the single crystal



R = OMe (a), OEt (b), OCH_2CF_3 (c), $OCH_2CF_2CHF_2$ (d), Ph (e)

SCHEME 1

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x-ray diffraction. The heating of the phosphoranes leads to formation phospholenes **3a–e**—the products of the salicylic fragment elimination and 1,3,2-dioxaphosphepines **4a–e** in various ratio depending on the R nature.