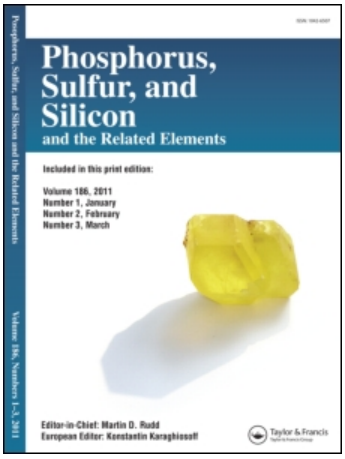

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The Reaction of 2-Dialkylamino-4-oxo-5,6-benzo-1,3,2-dioxaphosphorinanes with Pentafluorobenzaldehyde

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THE REACTION OF 2-DIALKYLAMINO-4-OXO-5,6-BENZO-1,3,2-DIOXAPHOSPHORINANES WITH PENTAFLUOROBENZALDEHYDE

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It was shown that the interaction of salicylamidophosphites **1** with pentafluorobenzaldehyde unexpectedly proceeds with the retention of the phosphorinane cycle and gives the cyclic phosphonate **2** with a high

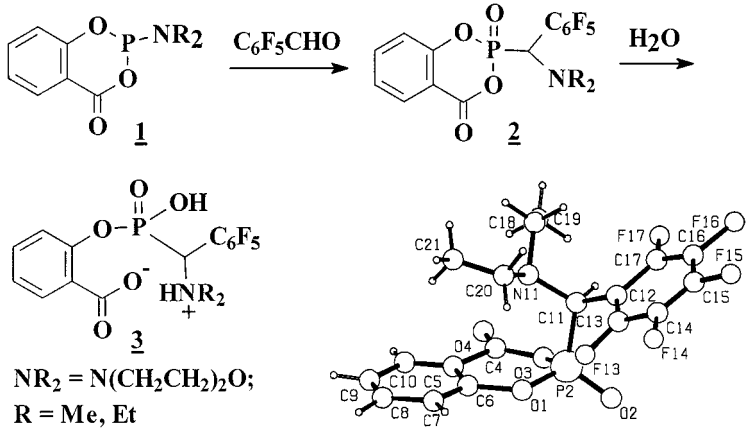

FIGURE 1

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stereoselectivity degree. The unusual O,N-exchange process takes place in the reaction. The structure of the main diastereoisomer **2** (R = Et) was determined by the single crystal x-ray diffraction (see Figure 1). The compound **2** is easy hydrolyzed under soft conditions and the open chain structure **3** is obtained. More deep hydrolysis of the compound **2** (R = Me) leads to formation of 1-hydroxypentafluorobenzylphosphonic acid **4**. The structure of the synthesized compounds was confirmed by ^{1}H, ^{13}C, ^{13}C-$\{^{1}H\}$, ^{31}P NMR, and IR spectroscopy.