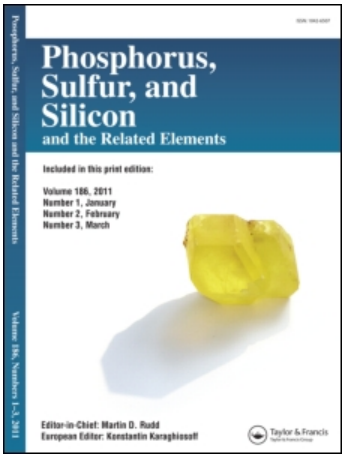

Phosphorus, Sulfur, and Silicon and the Related Elements
Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=t713618290

Chemo-and Stereoselectivity of Nucleophilic Substitution in Mixed Phosphorus-Carboxylic Anhydrides

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To cite this Article Woźniak, Lucyna A. , Chworoś, Arkadiusz and Stec, Wojciech J.(1999) 'Chemo-and Stereoselectivity of Nucleophilic Substitution in Mixed Phosphorus-Carboxylic Anhydrides', Phosphorus, Sulfur, and Silicon and the Related Elements, 147: 1, 435
To link to this Article: DOI: 10.1080/10426509908053697
URL: http://dx.doi.org/10.1080/10426509908053697

Phosphorus, Sulfur and Silicon, 1999, Vol. 147, pp. 435-435
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Chemo-and Stereoselectivity of Nucleophilic Substitution in Mixed Phosphorus-Carboxylic Anhydrides

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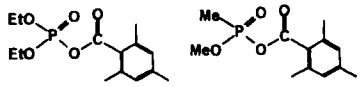
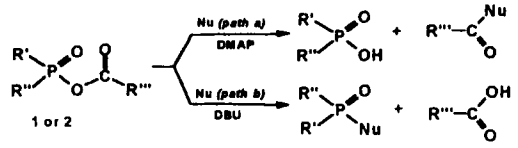
Mixed phosphorus-carboxylic anhydrides have demonstrated both acylating and phosphorylating properties.[1] Here we report the reactivity of *O,O*-diethyl (*O*-2,4,6-trimethylbenzoyl) phosphates (**1**), and *O*-methyl (*O*-2,4,6-trimetylbenzoyl) dimethylphosphonates (**2**) with nucleophiles in the presence of different strong organic bases (DBU, DMAP).



1 2

It was found that **1** acts as acylating agent towards nucleophiles (alcohol, water, $PhNH_2$) both in case of DBU (path a), and DMAP activation (path a), while **2** can be either acylating reagent if DMAP is used as a base (path a), or selective phosphorylating agent, if reaction with nucleophile (ROH, H_2O, PhSH) is catalyzed by DBU (path b).



Fluoride anion was found chemoselective P-attacking nucleophile in reactions with **1** and **2**.

References

[1] A.R.. Todd, *Proc. Nat. Sci.*, **45**, 1389 (1959).; V.M. Clark, *et al. Angew. Chem. Internat. Edit.* **3**, 678 (1964); A. J. Lambie, *Tetrahedron Letters*, 3709 (1966).

[2] L.A. Woźniak, A. Chworoś, W.J. Stec, submitted.