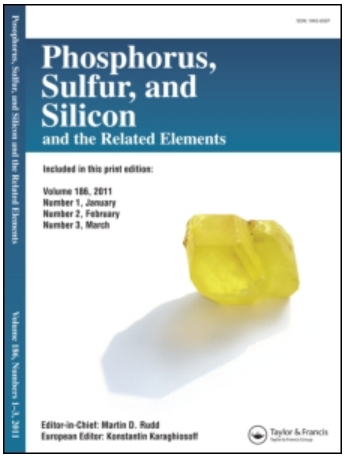


Phosphorus, Sulfur, and Silicon and the Related Elements

Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=t713618290

Synthesis and Properties of Some New 1,3,2-Oxazaphospholane Derivatives

Ru-Yu Chen[a]; Hua-Zheng Yang[a]; Shu-Hua Cui[a]; Jin-Shu Shao[a]; Zheng-Pu Zhang[a]; Hui-Lin Wang[a]
[a] Institute of Elemento-Organic Chemistry, Nankai University, Tianjin, P. R. China

To cite this Article Chen, Ru-Yu , Yang, Hua-Zheng , Cui, Shu-Hua , Shao, Jin-Shu , Zhang, Zheng-Pu and Wang, Hui-Lin(1987) 'Synthesis and Properties of Some New 1,3,2-Oxazaphospholane Derivatives', Phosphorus, Sulfur, and Silicon and the Related Elements, 30: 3, 764

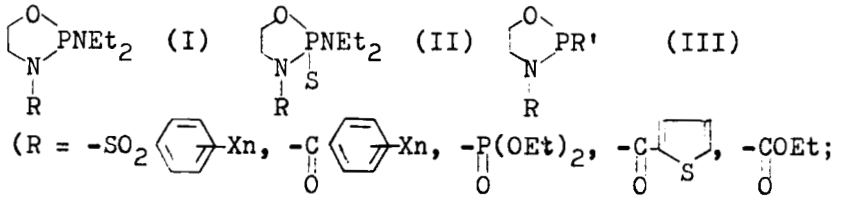
To link to this Article: DOI: 10.1080/03086648708079256

URL: http://dx.doi.org/10.1080/03086648708079256

Synthesis and Properties of Some New 1,3,2-Oxazaphospholane Derivatives

Ru-yu Chen*, Hua-zheng Yang, Shu-hua Cui, Jin-shu Shao,
Zheng-pu Zhang and Hui-lin Wang
Institute of Elemento-Organic Chemistry,
Nankai University, Tianjin, P. R. China

A series of new 1,3,2-oxazaphospholane derivatives(I) have been synthesized by the reaction of $P(NEt_2)_3$ with $RNHCH_2CH_2OH$ at 80°C. When they were refluxed with sulfur in benzene, compounds II were obtained conveniently.



I were easily oxidized in air. The $-NEt_2$ group of I was substituted with phenols and amines giving the corresponding derivatives(III). With high stability II(R = $-SO_2$ Xn) were not decomposed until 224°C by thermo-gravimetric analysis. They were hydrolyzed with 0.01N NaOH in the aqueous solution of acetone with the cleavage of P-O bond but with the 0.01N HCl in the same solvent there was no cleavage of P-N bond. It seems that TBP intermediates might not be predominant in the process of acidic hydrolysis.

All of these compounds have been confirmed by elemental analysis, IR, ^{1}HNMR and MS.