

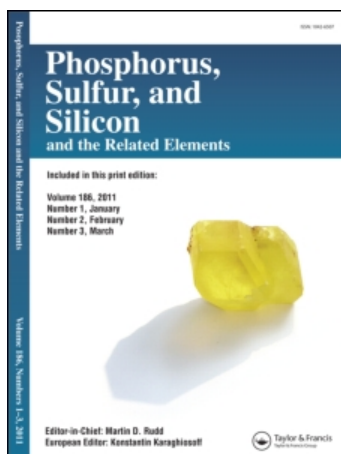
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1,2,4,3-Triazaphospholo[1,5-a]pyridines

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1,2,4,3-Triazaphospholo[1,5-*a*]pyridines

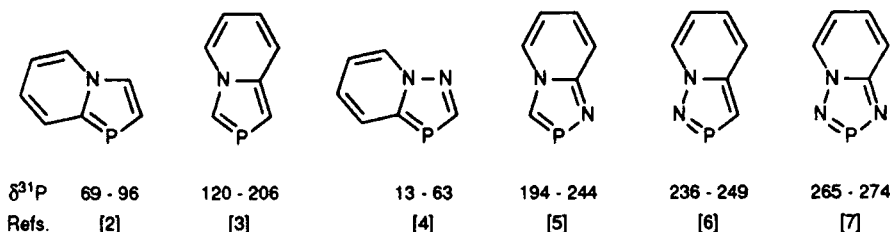
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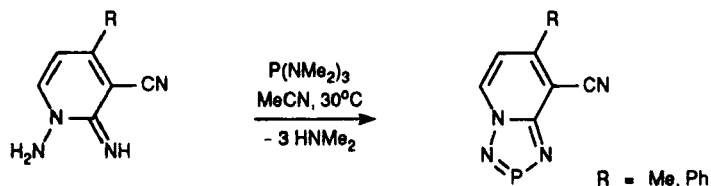
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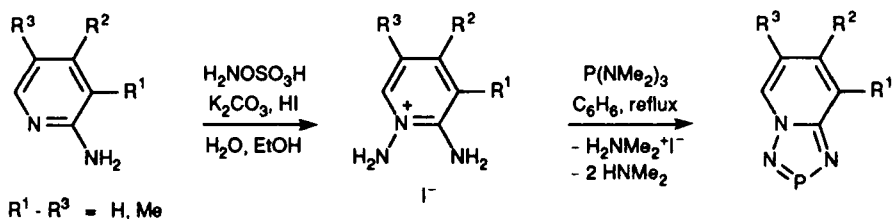
Azaphospholes with an anellated pyridine ring have become available only recently¹. Representatives of six *a*-fused azaphospholopyridine are known:



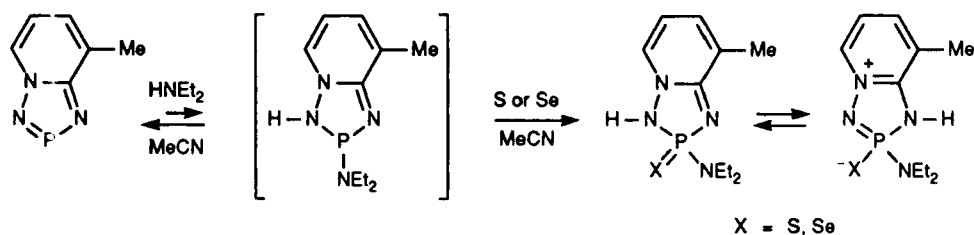
A first synthesis of 1,2,4,3-triazaphospholo[1,5-*a*]pyridines involves the 4+1 cyclocondensation of 1-amino-2-imino-2*H*-pyridines with $\text{P}(\text{NMe}_2)_3$ ⁷. It is restricted to the 8-cyano derivatives, however.



A more general two step synthesis uses commercially available 2-amino pyridines as starting materials. In the first step they are aminated at the pyridinic nitrogen and the resulting salts are then condensed with $\text{P}(\text{NMe}_2)_3$.



The new triazaphospholopyridines are conveniently purified by sublimation. They are colorless moisture sensitive crystalline solids, easily soluble in non polar organic solvents. With two equivalents of water they yield a colorless crystalline product, essentially insoluble in aprotic organic solvents. While no reaction is observed with diethylamine alone, the sulfide and selenide of its 1,2-adduct to the $\text{P}=\text{N}$ -bond are obtained, when the reaction is carried out in the presence of sulfur or gray selenium, respectively.



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