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Phosphorus Compounds as Cyclization Promoted Reagents: Preparation of 1,4- $\alpha_3\gamma_3$ -Diphospha-2,6-Diazines

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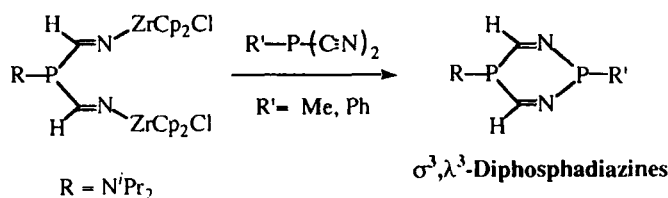
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Phosphorus Compounds as Cyclization Promoted Reagents : Preparation of 1,4- σ^3, λ^3 -Diphospha-2,6-Diazines

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Imines are important classes of compounds in chemistry. In our continued investigation in the studies of the interactions between group 4 (Zr, Ti) elements and main group elements we recently developed a new methodology for the preparation of various σ^3, λ^3 -phospha-imines. Extension of this work allowed us to prepare unprecedented 8- π -electron 6-membered phosphorus heterocycles: 1,4- σ^3, λ^3 -diphospha-2,6-diazines. The formation of these diazines involved for the first time the use of phosphorus derivatives as cyclization promoted reagents in zirconocene chemistry.



The X-ray crystal structure showed a boat conformation for these diazines. The reactivity of these new phosphorus heterocycles as well as their transition metal coordination ability open a new area in dihydrodiazine chemistry which are important species in the area of drug development and from the biochemical point of view [1].

References

- [1] N. Bodor In *Design of Biopharmaceutical Properties Through Prodrugs and Analogs*; E.B. Roche, Ed.; American Pharmaceutical Associations: Washington, DC, 1977; p 98.