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## Exocyclic P--Hlg Bond Ionization in 1,3,2-Oxazaphospholines

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# EXOCYCLIC P-HLG BOND IONIZATION IN 1,3,2-OXAZAPHOSPHOLINES

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We have found that  $\alpha$ -amino ketones upon interaction with electrophilic phosphorus compounds form novel types 1,3,2-oxazaphospholines with highly polarized P–Hlg bonds. Now novel types of 1,3,2-oxazaphospholines with highly polarized P–Hlg bonds and their ionization products are synthesized and investigated.

I HIg = F(a), Cl(b), Br(c), I(d) II A = BF<sub>4</sub>(a), AlCl<sub>4</sub> (b)

#### SCHEME 1

The x-ray and spectral data allow us to suppose the existence of equilibrium between 1,3,2-oxazaphospholines with highly polarized P—Hlg bonds and their ionization products in solvents with high dielectric constant. In CDCl<sub>3</sub> solution compounds I a—d virtually don't display ionization signs, but iodide I d dissociates in  $(Me_2N)_3$ PO solution up to 80–90%. The addition of Lewis acids to the solutions of halogenides I a,b in CDCl<sub>3</sub> leads to the shift of equilibrium toward the ionized form. Salts II a,b were isolated as pure crystals after evaporation of reaction solutions.

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## **REFERENCES**

- S. E. Pipko, Yu. V. Balitzky, A. N. Chernega, A. D. Sinitsa, and Yu. G. Gololobov, *Phosphorus, Sulfur, and Silicon*, 105, 23–31 (1995).
- [2] S. E. Pipko, Yu. V. Balitzky, A. D. Sinitsa, and Yu. G. Gololobov, Tetrahedron Letters, 35, 165–168 (1994).