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The First Stable P-Phosphoranyl Substituted Phosphaalkene

Elena V. Popova^a; Vladimir F. Mironov^a; Eleonora A. Ishmaeva^b; Igor I. Patsanovsky^a

^a A. E. Arbuzov Institute of Organic and Physical Chemistry, Kazan, Russia ^b Kazan State University, Kazan, Russia

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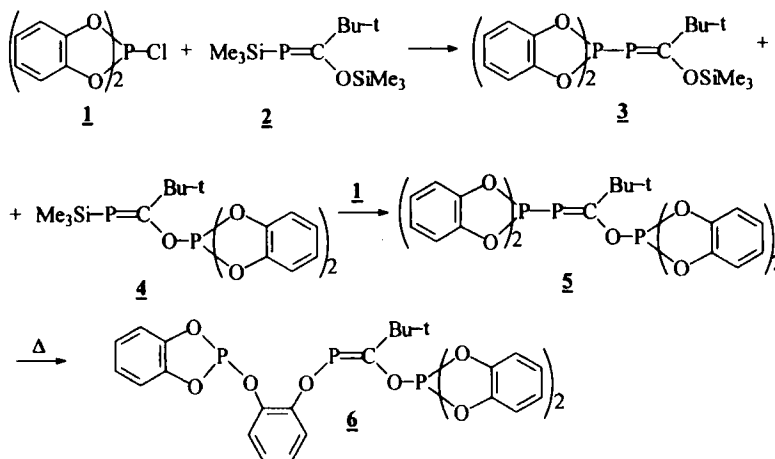
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The First Stable P-Phosphoranyl Substituted Phosphaalkene

ELENA V. POPOVA^a, VLADIMIR F. MIRONOV^a, ELEONORA A. ISHMAEVA^b and IGOR I. PATSANOVSKY^a

^aA.E. Arbuzov Institute of Organic and Physical Chemistry, Kazan, 420088, Russia and ^bKazan State University, Kazan, 420008, Russia

Interaction of bis(catechol)chlorophosphorane (**1**) with two-coordinated phosphorus derivative (**2**) has been studied by dynamic ³¹P NMR method. The compounds react under soft conditions in methylene chloride with formation of phosphaalkene (**3**) - the first stable representative of P^{II}-P^V structure derivatives.



The formation of intermediate O- and P-phosphoranylated phosphaalkenes (**3,4**) and has been revealed also by ³¹P NMR method [(**3**), δ_P 119.6 (d), 10.7 (d) ppm, ¹J_{PP} 447.1 Hz; (**4**), 116.3 (s), -31.6 (s) ppm]. The structure of isolated crystals (**5**) has been confirmed by ¹³C, ³¹P NMR and IR spectroscopy methods [(**5**), δ_P 123.8 (d), 11.5 (d), -31.8 (s) ppm, ¹J_{PP} 266.8 Hz). Compound (**5**) converts preferably into phosphaalkene (**6**) [δ_P 136.8 (s), 127.6 (s), -31.8 (s) ppm,] under heating.

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