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Publisher *Taylor & Francis*

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## 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>

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**To cite this Article** Keglevich, Gy. , Petnehazy, I. and Tbke, L.(1990) 'The Formation of Phosphacycloheptatrienes in Ring Enlargement Reaction', *Phosphorus, Sulfur, and Silicon and the Related Elements*, 51: 1, 273

**To link to this Article:** DOI: 10.1080/10426509008040807

**URL:** <http://dx.doi.org/10.1080/10426509008040807>

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## THE FORMATION OF PHOSPHACYCLOHEPTATRIENES IN RING ENLARGEMENT REACTION

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The formation of substituted phosphacycloheptatrienes in ring expansion reaction(s) is described. From the reaction of 3,4-dimethyl-1-phenyl-3-phospholene-1-oxide (1,  $R^1 = C_6H_5$ ,  $R^2 = R^3 = CH_3$ ) with dichlorocarbene under liquid-liquid phase transfer circumstances not the expected adduct but the appropriate phosphacycloheptatriene (4,  $R_1, R_2, R_3$  as above) was prepared. The formation of this product can be explained assuming two ring expansions effected by two series of dichlorocarbene addition and cyclopropane ring opening. In the similar reaction of the methoxy-phospholene derivative (1,  $R^1 = CH_3O$ ,  $R^2 = R^3 = CH_3$ ) four other products are also formed beside the phosphacycloheptatriene. Again phosphacycloheptatrienes (4) are formed as the result of dichlorocarbene addition to the regioisomers of dihydrophosphorins (2) obtained from the phospholene-dichlorocarbene adducts by thermolysis. The same product can be derived from each regioisomeric pair.

