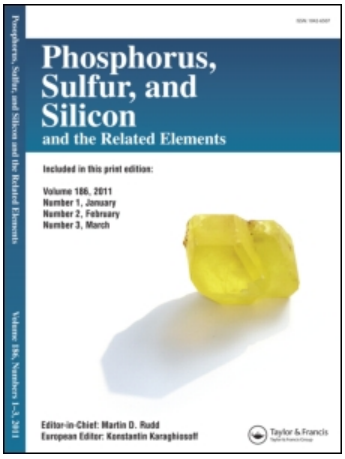

Phosphorus, Sulfur, and Silicon and the Related Elements
Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=t713618290

Conformational Preferences of Vinyl Piiosphine Oxides in Solution Alud in the Solid State

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To cite this Article Pietrusiewicz, K. M. and Zabłocka, M.(1990) 'Conformational Preferences of Vinyl Piiosphine Oxides in Solution Alud in the Solid State', Phosphorus, Sulfur, and Silicon and the Related Elements, 51: 1, 236
To link to this Article: DOI: 10.1080/10426509008040770
URL: http://dx.doi.org/10.1080/10426509008040770

Phosphorus, Sulfur, and Silicon, 1990, Vols. 51/52, p. 236
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CONFORMATIONAL PREFERENCES OF VINYL PHOSPHINE OXIDES IN SOLUTION AND IN THE SOLID STATE

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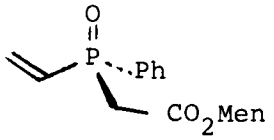
The insight into s-cis vs. s-trans conformational equilibria in simple activated olefins is of prime importance for transition state modeling and for understanding of stereochemical results of the reactions involving such olefins. Some acrylates and vinyl sulfoxides have been found recently to choose the corresponding s-cis conformation as the reactive conformation in their thermal cycloaddition and conjugate addition reactions. In the course of our stereochemical studies involving chiral phosphine oxides we were prompted to address analogous conformational issue in regard to the conjugated vinyl-phosphoryl moiety. The two P-epimeric vinyl phosphine oxides 1 and 2 served us as the model compounds and their detailed analysis in solution



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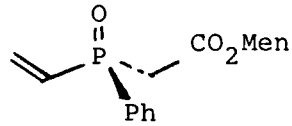

2

and in the solid state will be presented. The presentation will include 2D ^{1}H NMR as well as the solid state and solution ^{13}C NMR data, the X-ray and IR analysis and also, comparison with some reference compounds. The significance of the depicted s-cis conformations as well as of the syn-coplanar array of the P=O and C=O dipoles in the studied compounds is implied.

Men: L-menthyl