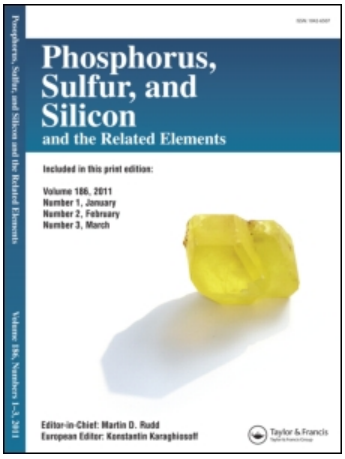

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SYNTHESIS AND CHARGE DISTRIBUTION ANALYSIS OF HETEROCYCLIC SULFOXIDES, SULFONES AND RELATED UNSATURATED DERIVATIVES

Uri Zoller[a]
[a] Division of Chemical Studies, Haifa University, Israel

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SYNTHESIS AND CHARGE DISTRIBUTION ANALYSIS OF HETEROCYCLIC SULFOXIDES, SULFONES AND RELATED UNSATURATED DERIVATIVES.

Uri Zoller

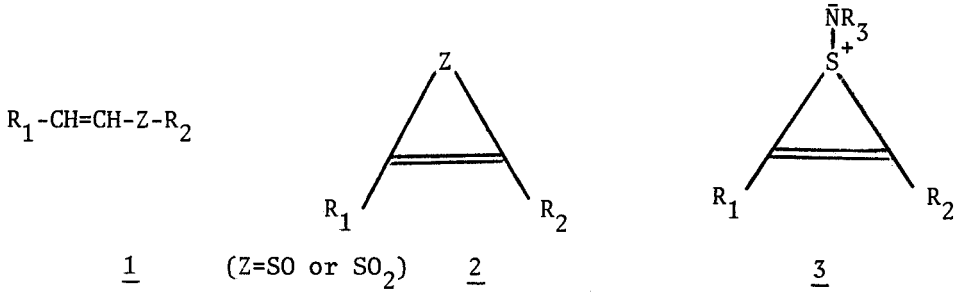
Division of Chemical Studies, Haifa University - Oranim,
P.O. Kiriat Tivon, Israel.

A recently developed ^{13}C NMR-based methodology, provides a simple technique for obtaining an electronic description of a wide variety of unsaturated carbonyl-containing compounds[1]. This wholly-empirical approach allows us to reveal the charge density patterns in the analized molecules as well as to estimate the aromatic character of appropriate systems.

Our work is the extension of this method to vinylic sulfur compounds (i.e. sulfones, sulfoxides and related unsaturated derivatives) which should allow us to get a deeper insight into a variety of problems associated with unsaturated sulfur compounds. This includes the problems involved with the fascinating questions of π-d bonding in conjugatively unsaturated sulfones (and sulfoxides), as well as with the aromatic nature of sulfur-containing heterocycles.

Our preliminary efforts have been focused on demonstrating the applicability of the method to organo-sulfur systems using model compounds of type 1. This was followed by the analysis of selected three-membered heterocycles of type 2 refering particularly, to the intriguing question of their being possible non-benzoid aromatic systems[2].

Finally, the synthesis of the hitherto unknown iminosulfurane[3] 3 was attempted in order to further testing the validity of our ideas.



1 (Z=SO or SO_2) 2 3

Preliminary results will be presented and discussed with special emphasis on the correlation with the analogous α -β unsaturated carbonyl systems.

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