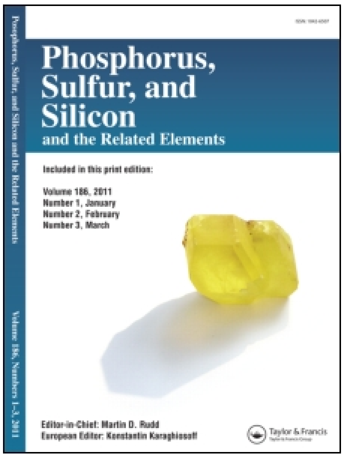

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ON THE ORIGIN OF THE CONFIGURATIONAL STABILITY OF CARBANIONS α TO SULFOXIDES : SPECTROSCOPIC STUDIES

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ON THE ORIGIN OF THE CONFIGURATIONAL STABILITY OF CARBANIONS α TO SULFOXIDES : SPECTROSCOPIC STUDIES

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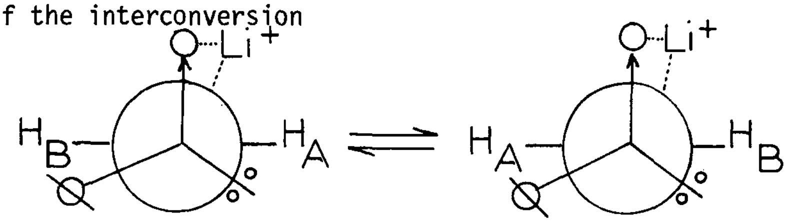
In recent papers (1-2), we have shown that the metalated carbon in α lithiosulfoxides is essentially planar, this structure being induced by the internal chelation of the cation. The stereoselectivity of the alkylation of these species is very well rationalized on this basis (3).

We are now reporting an I.R. study of C_6H_5-SO-CH_2Li (K) which definitely proves the existence of both C...Li and O...Li interactions.

The life-time of this chelate is determined, in different media, by Li NMR. The exchange between C_6H_5-$SOCH_2Li$ and $Li^+ClO_4^-$ is slow at low temperature and the $\Delta G^{\neq}$ of the process can be estimated.

The $\Delta G^{\neq}$ of the interconversion is obtained by ^{1}H NMR, under the same set of conditions.



The comparison of these values allows a discussion of the relative importance of the chelation and of the intrinsic barrier in the configurational stability of the carbanions.

1) *R. Lett, G. Chassaing and A. Marquet, J. of Organomet. Chem. 1976, 111, C17.*
2) *G. Chassaing and A. Marquet, Tetrahedron, 1978, under press.*
3) *G. Chassaing, R. Lett and A. Marquet, Tetrahedron Letters, 1978, 471.*