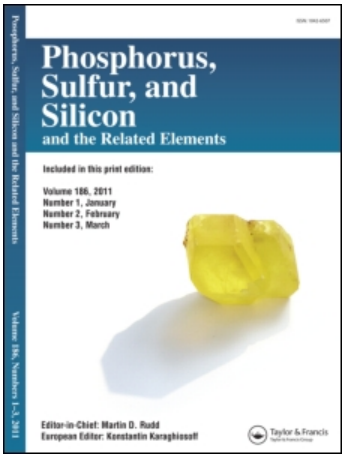

Phosphorus, Sulfur, and Silicon and the Related Elements
Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=t713618290

STRUCTURE AND PROPERTIES OF RADICALS GENERATED FROM 1,3-DITHIOCYCLOALKANES

S. S. Zlotsky[a]
[a] Ufa Oil Institue, Ufa, USSR

To cite this Article Zlotsky, S. S.(1979) 'STRUCTURE AND PROPERTIES OF RADICALS GENERATED FROM 1,3-DITHIOCYCLOALKANES', Phosphorus, Sulfur, and Silicon and the Related Elements, 6: 1, 361
To link to this Article: DOI: 10.1080/03086647908080454
URL: http://dx.doi.org/10.1080/03086647908080454

Phosphorus and Sulfur
1979, Vol. 6, p. 361

STRUCTURE AND PROPERTIES OF RADICALS GENERATED FROM 1,3-OXATHIO- and 1,3-DITHIOCYCLOALKANES

S.S.Zlotsky

Ufa Oil Institute, Ufa, USSR

Structure of cyclo -carbon-centered radicals formed from 1,3-oxathio- and 1,3-dithiocycloalkanes under the effect of hydroxy ($\dot{O}H$), aminil ($\dot{N}H_2$) and tret.butoxy ($But\dot{O}$) radicals was investigated by EPR method. Preferred place of attack of heterocyclic compounds, conformation of three valence carbonatom , relationship between spectrum variables and selectivity of formation of carbon-centered radicals were found. Energy preference of rearangement of cyclic alkylthioalkoxyalkyl radicals into linear carbon-centered radicals was shown.

Relative activity of saturated sulphury heterocyclic compounds to alkoxy and alkyl radicals was determined.

Activation of C-H bond by sulphur atoms in α-position was quantitatively estimated.

Kinetics as well as mechanism of radical isomerization of 1,3 oxathiocyclanes to isomeric thioesters of acids were studied.

Possibilities of application of homolitic reactions of 1,3-dithiocyclanes in organic synthesis are discussed.