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## Phosphorus, Sulfur, and Silicon and the Related Elements

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

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

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Structure of cyclo -carbon-centered radicals formed from 1,3-oxathio- and 1,3-dithiocycloalkanes under the effect of hydroxy ( $\dot{\text{O}}\text{H}$ ), aminil ( $\dot{\text{N}}\text{H}_2$ ) and tret.butoxy ( $\text{But}\dot{\text{O}}$ ) 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 rearrangement 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  $\alpha$ -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 homolytic reactions of 1,3-dithiocyclanes in organic synthesis are discussed.