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## Ionization Constants and Parachors of Some Furan compounds

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SOME REACTIONS OF DIPHENYLETHYLENEIMINE  
AND ATTEMPTS TO PREPARE AMINOETHENES

GEORGE H. COLEMAN AND G. P. WAUGH

Ozone had no effect on diphenylethyleneimine. The benzoyl derivative was prepared in pyridine by the action of benzoyl chloride. In dilute sodium hydroxide the same reagent formed  $\alpha$ - $\beta$ -diphenyl- $\beta$ -chloroethylamine. This compound was changed to benzoyl diphenylethyleneimine by heating with alcoholic sodium ethylate. On being heated to 225° diphenylethyleneimine rearranged to benzalbenzylamine.

A number of experiments were tried in an attempt to prepare aminoethenes but the results were not conclusive.

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IONIZATION CONSTANTS AND PARACHORS OF  
SOME FURAN COMPOUNDS

HENRY GILMAN, WILLARD E. CATLIN AND ROBERT K. DAVIS

The technical utilization of furfural and derivatives is dependent to a marked extent on the constitution of the furan nucleus, on rules governing orientation in nuclear substitution and on the relative negativity or super-aromaticity of furan when compared with aromatic types like benzene. Ionization constant determination of furoic acids reveals that 2-furoic acid is distinctly stronger than benzoic acid and that the isomeric 3-furoic acid is only slightly stronger than benzoic acid. This is in complete agreement with the negativities or super-aromaticities of the 2- and 3-furyl groups, respectively. Furthermore, the ionization constants of various halogen-substituted furoic acids indicates that the furan nucleus is puckered or has the nuclear elements in different planes. Parachor measurements of simple types are those calculated for the diolefin formula, but the method should be valuable in ascertaining the true structure of a compound like 2-nitrofurane and of types (like those having the furfuryl group) which undergo intramolecular rearrangement.

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