

CHEMISTRY

Chairman: R. G. LARSON, Valparaiso University

JOHN A. BUEHLER, Anderson College, was elected chairman for 1955

ABSTRACTS

The Solubility of Silver Nitrite in Aqueous Solutions of Potassium Nitrate. MARTIN ALLEN and WILLIAM C. NEEDLER, Butler University.—This is a preliminary report on a study of the solubility of silver nitrite in aqueous solutions of potassium nitrate at 25° C. The apparent inapplicability of the Debye and Hückel theory to the experimental results indicates that several ionic equilibria are probably involved. A plausible interpretation of the data can be obtained on the assumption of incomplete ionization of silver nitrite.

Instrumentation—Proposed New Major at Marian College. SISTER MARY ROSE STOCKTON, Marian College.—Papers on instrumentation courses in the graduate schools and senior classes appearing recently in the literature seem to deplore the fact that there is not enough time in the present one- and two-semester courses to cover all the material as well as it should be covered. This gave the author the idea that perhaps it is now time to offer a major in instrumentation in the undergraduate school. She wrote to instrument manufacturers, distributors, and friends who might be interested, to ask their advice as to the feasibility of such a plan. The response was so encouraging and gratifying that she has prepared a course of studies leading to a major in instrumentation and has outlined in a preliminary manner the courses in instrumentation that will be offered and some of the material to be covered in each course.

Resonance in B-Bromovinyl Ethyl Ether as Indicated by Infrared Spectra. T. C. SCHWAN, Valparaiso University, and C. C. PRICE, University of Pennsylvania.—Infrared data for vinyl bromide, ethyl vinyl ether and B-bromovinyl ethyl ether are discussed. Resonance in these compounds is also discussed. It is shown that in B-bromovinyl ethyl ether, the resonance effects of the bromo and ethoxy groups oppose and nullify each other as indicated by the infrared data.

The Ultraviolet Absorption Spectra of Hexachlorocyclopentadiene and derivatives. E. T. MCBEE, C. W. ROBERTS and J. D. IDOL, JR., Purdue University.—The absorption spectra for hexachlorocyclopentadiene and a number of its derivatives have been determined in the 200 to 400 μ region. The bathochromic and hypsochromic shifts resulting from extensive chlorine substitution on the cyclopentadiene and cyclopentene nuclei have been evaluated. This information has been used to help confirm or disprove the structure of some derivatives of hexachlorocyclopentadiene.

Fluorine-containing Anesthetics. E. T. MCBEE, D. H. CAMPBELL and C. W. ROBERTS, Purdue University.—The results of the testing of organic fluorine compounds for anesthetic activity, flammability in oxygen, and

stability to alkali have been examined and several empirical relationships have been obtained which have enabled the determination of the structural features desired in compounds to be tested as inhalation anesthetics. Fourteen organic fluorine compounds were tested for flammability in oxygen and for stability to alkali and the results concur with the relationships obtained.

The flammabilities in oxygen of the compounds were determined by sparking a series of mixtures of the compound and pure oxygen in an apparatus that permitted closed observation of the point of ignition. The stability to alkali was determined by treatment of the compounds with strong sodium hydroxide solution for one day at fifty degrees.