

## SECTION ON CHEMISTRY

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Chairman: FRANK V. GRAHAM, Ball State Teachers College

During the greater part of the session of the Section on Chemistry, about 100 to 125 members of the Academy and students of Purdue University were in attendance. The papers which were given are published in full or represented by abstracts below. Professor Herman T. Briscoe, Indiana University, was elected chairman of the section for 1939.

### ABSTRACTS

**A striking illustration of periodicity among some of the halogens.** FRANK B. WADE, Shortridge H. S., Indianapolis.—Solutions of iodine in aqueous solutions of KI, KBr, KCl, and KF show a series of colors ranging from the familiar deep brown of the iodine-iodide solution through a lighter brown for the iodine-bromide solution, a still lighter brown for the iodine-bromide solution, and a pale brown for the iodine-fluoride solution. These may be measured in a color comparator. A search of the literature is being made on the solubility of iodine in the various halide solutions, and the other halogens will be studied as to their solubility in halide salts. Values will be plotted against atomic numbers to show periodicity.

**Movie demonstrations in quantitative analysis.** M. G. MELLON, Purdue University.—In the usual demonstration of certain techniques in analysis only a few students can be accommodated at one time. The movie film makes such demonstrations easily visible to many. Two films have been prepared for such use. One shows the operations of using a balance to weigh samples, and the other shows the formation and handling of a precipitate which is to be weighed.

**A protective coating for zinc surfaces.** E. J. WILHELM, University of Notre Dame.—Zinc has excellent corrosion resistance, but under certain conditions involving contact with excessive moisture a bulky type corrosion product often forms. A protective film capable of preventing this corrosion is produced by immersion in an acid dichromate solution. Its effectiveness is attributed to the presence of a slightly soluble corrosion inhibitor which is released in the presence of water.