platinum ware containing 2.4 per cent. iridium. Palau and rhotanium "C" behave towards reagents in about the same way as rhotanium "A," except that they are not suitable for potassium pyrosulphate fusions and are inferior to grade "A" for sodium hydroxide fusions. The only striking distinction between rhotanium "C" and palau is the latter's slight superiority in the case of the potassium pyrosulphate fusions. Palau and both grades of rhotanium may all be used to advantage in the electrolysis of chemical solutions, but only as cathodes. As anodes the alloys are worthless. It is believed that in order that the above tests may indicate the true merit of the alloys, information should be available as to the behavior of these wares in actual laboratory service. Unfortunately the authors have very little of such information at their disposal, and suggest that any further available information of this nature, both favorable and unfavorable, be communicated to the Bureau of Standards.

Hydrogen overvoltage; applications to reduction, metal corrosion and deposition (lantern): D. A. MacInnes and A. W. Contieri. MacInnes and Adler have advanced a theory in which hydrogen overvoltage is related to the surface energy necessary to form the evolved bubbles. The theory requires that the overvoltage increase with a decrease of the external pressure, and *vice versa*, a prediction verified in some unpublished work by Goodwin and Wilson. In this paper it is shown that, in acid solutions, reduction by metals is accelerated, corrosion of metals is decreased, and the electrolytic deposition of metals is made more efficient, by reducing the external pressure.

The ternary system CaO-MgO-SiO_2 (lantern): John B. Ferguson and H. E. Merwin. A brief discussion of the experimental methods, followed by a general survey of the liquidus-solidus relations. Several new compounds will be described; the solid solutions of different types which occur will be touched upon and the effect of solid solutions upon inversion temperature will be mentioned.

The influence of chemical composition on the birefringence in strained glass (lantern): Erskine D. Williamson. All glasses to be used for optical instruments must be tested for the presence of internal strains. The only convenient method of accomplishing this is to measure birefringence as observed between crossed nicols. It is therefore necessary to know how the observed birefringence for a given amount of strain depends upon the composition of the glass which is being used. Figures are presented for the eight types of optical glass made by the Pittsburgh Plate Glass Company during the war.

The determination of oxygen by the copper-ammonia-ammonium chloride reagent: W. L. Badger.

Fluidity and hydration (lantern): Eugene C. Bingham.

The preparation of cyanogen chloride: W. L. Jennings and W. B. Scott. Nearly quantitative yields (98 per cent.) of cyanogen chloride may be obtained conveniently by passing chlorine into finely powdered sodium cyanide, containing 2 per cent. of water, suspended in carbon tetrachloride and kept cooled to $-3°$ C. At the end of the operation the product is distilled off and by redistillation over mercury is obtained pure. This method appears to be an improvement on the earlier methods in which mercuric cyanide was used as initial material, and on the later methods in which chlorine was passed into aqueous solutions of hydrocyanic acid or alkaline cyanides.

Electrolytic preparation of permanganates: Charles Hecker.

A study of the constant-boiling mixture of hydrochloric acid and water: Marion Hollingsworth.

A holder for spools of iron wire for standardization: Marion Hollingsworth. The holder is made from sheet metal and carries the spool supported in a stoppered bottle. The construction is such that the wire may be conveniently drawn out as desired without exposing that which is left to the corroding atmosphere of the laboratory.

A new buret support: Marion Hollingsworth. This support is designed to carry a buret attached to a supply bottle. It has the advantage that the buret's height may be varied without any of the graduations being obscured.

Charles L. Parsons,
Secretary

(*To be concluded*)

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