Electromotive Forces

On the thermo-electric properties of several alloys. *A. Cornu. Comptes rendus,* **130,** *1300 (1900).* — The author has made measurements with ten nickel steels, three aluminum bronzes, five bronzes, five brasses, four German silvers.
W. D. B.

Negative electrification of the secondary rays produced by the Röntgen rays. *P. Curie and G. Sagnac. Comptes rendus,* **130,** *1013 (1900).* — While the Röntgen rays themselves have no perceptible negative charge, the secondary rays show this phenomenon, the effect being especially marked with platinum and lead.
W. D. B.

The electric charge on the deflectable radium rays. *P. and S. Curie. Comptes rendus,* **130,** *647 (1900).* — The rays from radium which can be deflected by a magnetic field are charged with negative electricity.
W. D. B.

Electrolysis and Electrolytic Dissociation

Electrolysis of the nitrogen hydrides and of hydroxylamine. *E. C. Szarvasy. Jour. Chem. Soc.* **77,** *603 (1900).* — If a current density exceeding 1.5 amp/cm² be employed, the nitrogen evolved at the anode will be very closely one-third the volume of the hydrogen evolved at the cathode, whether the electrolyte be ammonia, or ammonia and sodium chloride. With hydrazine hydrate, chloride, or sulphate, the ratio is one to two at all the current densities tried. With azo-imide or the sodium salt, the ratio was three to one.
W. D. B.

Electrolytic determination of the lead in lead sulphate and lead chromate. *C. Marié. Comptes rendus,* **130,** *1032 (1900).* — Lead sulphate is dissolved by nitric acid and ammonium nitrate; so is lead chromate. The resulting solutions are electrolyzed.
W. D. B.

Electrolytic preparation of induline dyes. *E. C. Szarvasy. Jour. Chem. Soc.* **77,** *207 (1900).* — Reviewed (4, 699) from Zeit. Elektrochemie, **6,** 403 (1900).

On the electrolytic preparation of potassium chlorate. *A. Brochet. Comptes rendus,* **130,** *718 (1900).* — The author endorses Oettel's views on the subject.
W. D. B.

A comparison of platinum thermometers of different degrees of purity. *H. M. Tory. Phil. Mag.* [5] **50,** *421 (1900).* — In all, five wires were compared between 400° and 1000° with the result that, although the temperature coefficient varied as much as 40 percent, the platinum temperatures agreed to 9° at 1000°. The same order of accuracy was shown on the air temperatures obtained by the usual difference formula, and was to be attributed to the wide difference in the degrees of purity of the wires. It was found that a simple linear formula could be obtained showing the relation between the platinum temperatures, which gives a ready and accurate method of comparing different samples of wire with different constants. A standard wire could thus be selected having a definite sulphur boiling-point and a definite silver melting-point. The formula reads

$$pt = pt_1 + apt_1 + b,$$