

as rigorously accurate except on the condition of the electrodes presenting no trace of polarization. This condition is generally supposed to be strictly complied with when the electrodes are formed of molten metals; but the present researches prove that such is not always the case.—On the reciprocal influence of two rectangular magnetizings in iron, by M. Paul Janet. A piece of iron being magnetized in a given direction by a given magnetic force, the author inquires whether this magnetic state becomes modified by the establishing or interrupting a fresh magnetic current perpendicular to the first.—On drops of mercury as electrodes, by M. Ostwald.—A correction as regards the action of sulphurous acid on the alkaline thiosulphates, by M. A. Villiers. In a previous note (*Comptes rendus*, cvi. pp. 851 and 1354) the author described the sodium salt of a new oxy-acid of sulphur as obtained by the action of sulphurous acid on the sodium thiosulphate, and as having the formula $S_4O_8Na_2$. But he has since discovered that this salt contains two atoms of hydrogen, so that its formula is $S_4O_8Na_2H_4 = S_4O_8Na_2 \cdot 2H_2O$; that is to say, it is hydrated tetrathionate of soda.—On the valency of aluminium, by M. Alphonse Combes. The vapour-density of $Al(C_2H_7O_2)_3$ at 360° in an atmosphere of nitrogen was found to be 11.25, agreeing with the above formula. Its valency at this comparatively low temperature therefore shows its analogy with indium and other triad elements.—Combination of mannite with the aldehydes of the fatty series: ethylic acetal, by M. J. Meunier. Two processes are described, by means of which the ethylic acetal of mannite may easily be prepared. The combination of mannite with an aldehyde of the aromatic series (benzoic aldehyde) has already been studied. It now appears that an acid solution of mannite, mixed with equal molecular weights of acetic and benzoic aldehydes, yields ethyl acetal, and not an acetal resulting from the simultaneous combination of the two aldehydes.—M. A. Haller describes the preparation of some new neutral and acid ethers of the camphols, and also gives an easy process for the separation of camphor and camphol.—M. Aimé Girard reports the results of some protracted experiments on the cultivation of the potato in France, with a view to the selection of the best tubers, and a more abundant yield of starch-producing roots.—M. G. Hayem studies the causes of the fatal effects resulting from the transfusion of blood between animals of different species, and more especially from the injection of dogs' blood in the rabbit.—The porphyritic rocks of Cavenac, near Saint-Pons, are described by MM. P. de Rouville and Auguste Delage; and those of the Forez district by M. U. Le Verrier.—M. Ed. Piette gives an account of some human and animal remains representing a transitional epoch between Quaternary and modern times, recently discovered by him in a cave on the left bank of the Arize.

Astronomical Society, February 6.—M. Flammarion in the chair.—M. Guiot, of Soissons, sent observations of Uranus made with the naked eye, and of Neptune with an opera-glass.—M. Schmoll showed diagrams of solar activity during 1888. He had noted 190 days without spots. M. Bruguière placed the minimum at 1888.8. MM. Lihou and Jacquot sent some remarks on the same subject.—M. Flammarion read a paper on γ Arietis, calling attention to the remarkable relative fixity of the two components. His measures at Juvisy gave $8''.51$ and $359''.1$.—M. Ch. Moussette made some remarks on the lunar eclipse of January 17.—General Parmentier read a note on the planetoids discovered in 1888, and showed that they confirmed the classification of those bodies which he published a few years ago.—M. Gunziger exhibited some Thompson's disks, and showed their utility for drawing and accurately placing sun-spots.

STOCKHOLM.

Royal Academy of Sciences, February 13.—Sir Joseph Lister was elected a Foreign Member of the Academy.—Prof. Wittrock gave an account of the present state of the Bergian Garden belonging to the Academy.—An examination of some Algæ referred to the genus *Adenocystis*, Hooker fil. et Harvey, by Prof. F. R. Kjellman.—Contributions to the flora of Medelpad, by Dr. L. M. Neuman.—Report on investigations relating to the flora and fauna of the peat-bogs of Scania, by Herr G. Andersson.—Report on investigations relating to the Ascomycetes, especially the coprophilous, of Öland, by Herr C. Starbäck.—A special case of the problem of three bodies, by Prof. Gylden.—On Odonata collected during the Swedish Expedition to Yenisei in 1876, by Dr. F. Trybom.—*Ichneumonnes pneustici*, by the late Lector A. E. Holmgren.—An

experiment with an electric spark and a small flame, by Dr. C. A. Mebius.—Prof. Nilsson gave an account of the researches of Dr. Krüss on cobalt and nickel.—On the singular points of the common algebraic differential equations, by Dr. J. Möller.—On maximi and minimi convergents of a certain class of distinct integrals, by Herr C. B. Cavallin.—On naphtœ acids, &c., by Dr. Ekstrand.—On the δ^1 - δ^2 -brom-naphthalin-sulphonic acid, by Herr Forsling.—On the reaction of the fuming sulphuric acid on α^1 - δ^1 -chlor-naphthylamin and on α^1 - δ^2 -chloracetnaphthalid, both combined with hydrochloric acid, by Herr P. Hellström.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

Mémoires de la Société de Physique et d'Histoire Naturelle de Genève, tome xxx. Première Partie (Genève).—History of the Linen Hall Library, Belfast; J. Anderson (Belfast).—Glimpes of Feverland: A. P. Crouch (Low).—Über den Einfluss der Festsitzenden Lebensweise auf die Thiere: Arnold Lang (Jena, Fischer).—Lehrbuch der Vergleichenden Anatomie, Erste Abthg.; Arnold Lang (Jena, Fischer).—Darwinism and Politics; D. G. Ritchie (Sonnenschein).—New South Wales, 1887, Report of the Minister of Public Instruction (Sydney, Potter).—Annual Report of the Department of Mines, N.S.W., for the Year 1887 (Sydney, Potter).—New South Wales Australian Museum, Report of Trustees for 1887 (Sydney, Potter).—New South Wales Report on Technical Education; E. Combes (Sydney, Potter).—Molekularphysik, Zweiter Band; Dr. O. Lehmann (Leipzig, Engelmann).—Histologische Beiträge, Heft 2; E. Strasburger (Jena, Fischer).—Über die Hypothese einer Vererbung von Verletzungen; Dr. A. Weismann (Jena, Fischer).—Intracelluläre Pangenesis; H. de Vries (Jena, Fischer).—The Best Forage Plants fully described and figured; Drs. Stebler and Schröter; translated by A. N. McAlpine (Nutt).—Index of Publications on Methods of Communication in the Field, and on Torpedo Warfare; R. von Fischer-Treuendorf (Alabaster).—Electricity in the Service of Man, Part 1, edited by R. Wormell (Cassell).—The Asclepiad, No. 21, vol. 6; Dr. B. W. Richardson (Longmans).—Note on the Lapps of Fimmark; Prince Roland Bonaparte (Paris).—La Nouvelle-Guinée, 3rd Notice—Le Fleuve Augusta; 4th Notice—Le Golfe Huon; Prince Roland Bonaparte (Paris).—Himmel und Erde, Heft 6 (Berlin, Paetel).—Beiblätter zu den Annalen der Physik und Chemie, 1889, No. 2 (Leipzig, Barth).—Verhandlungen des Naturhistorischen Vereines, Fünfte Folge, 5 Jahrgang, Zweite Hälfte (Bonn, Max Cohen).—Geological Magazine, March (Trübner).

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