

serpents, by MM. C. Phisalix and G. Bertrand. A claim for priority.—Experimental researches on the place of formation of urea in the animal organism. Preponderating rôle of the liver in its formation, by M. Kaufmann. The formation of urea is not entirely localised in the liver; all the tissues produce a certain quantity, though they are not so active as this organ. The production of urea seems to be allied to the phenomena of nutrition in the various tissues, and the phenomena of elaboration of nutritive materials in the blood by the hepatic gland.—The production of "glycosurie" in animals by psychical means, by M. Paul Gibier. The case of a dog is quoted in which isolation from its usual companions is followed after about three days by the appearance of sugar in the urine. The phenomenon persists during deprivation of liberty and companionship, but immediately ceases on restoration of the animal to its usual conditions.—On a new and special sense, by M. Danion.—A contribution to the study of the pest of fresh waters, by M. E. Bataillon. The diplobacillus described attacks fish at all stages of life. It also attacks crayfish.

AMSTERDAM.

Royal Academy of Sciences, January 27 (supplement).—Prof. van de Sande Bakhuyzen in the chair.—Prof. Kamerlingh Onnes gave the results of the measurements of Mr. C. H. Wind on the Kerr phenomenon in polar reflexion on nickel. The result is that the difference between the observed phase and that given by the theory of Prof. H. A. Lorentz has a constant value, as pointed out by Sisingh and introduced in Goldhammer's theory. For the phase of Sisingh the value of 37° was found. According to Drude's theory, it ought to be 60° . The difference is here much more marked than in the case of cobalt, from which Zeeman concluded in favour of Goldhammer's theory, and it leaves no doubt as to the validity of this conclusion. The experiments were described of Mr. M. de Haas, who has repeated the measurements of the coefficient of viscosity of methyl-chloride at temperatures approaching the critical temperature, previously made in his laboratory by Dr. L. M. T. Stoel. The results of Stoel were confirmed, and the method was modified so as to give the viscosity in absolute measure. The viscosities of Cl Me and CO_2 in the neighbourhood of the critical point were also confirmed. A sufficient accordance was found with the theorem, that in Van der Waals' corresponding states of two fluids the viscosity is in a definite ratio that can be calculated from the critical data.

March 31.—Prof. van de Sande Bakhuyzen in the chair.—Prof. H. Behrens gave an account of experiments on alloys of iron with chromium and tungsten, performed by Mr. van Lingen and himself in the laboratory of the Polytechnic School at Delft. In a ferrochrome with 13.3 Cr, 5.5 C, a ground mass was found, showing a hardness a little superior to iron, and yielding Fe and Cr to hydrochloric acid. By treatment with aqua regia the metal was disintegrated, and when observed under the microscope showed well-defined monoclinic prisms, which had a hardness between that of quartz and topaz ($7\frac{1}{2}$), and resisted the corrosive action of aqua regia for a fortnight. After washing with a heavy solution (3 g. 2 S), the composition of this compound was found to be 75.8 Fe, 16.8 Cr, 6.7 C. Chromium steel, with 7.5 Cr, 2.5 C, was subjected to the same treatment, yielding grains and small prisms of the same form and hardness. Analytical examination gave the following result:—73.5 Fe, 20.0 Cr, 6.7 C. From this the empiric formula $\text{Cr}_2\text{C}_3\text{Fe}_7$ can be deduced. Similar crystals were isolated from a ferrochrome with 50 per cent. Cr, much chromium being dissolved in strong hydrochloric acid. From ferrotungsten, containing much Mn and S, beautiful rhombic octahedra were obtained, containing 69.5 Fe, 28.9 W, 1.6 S; from another sample, poor in Mn and S, similar crystals, composed of 65.2 Fe, 28.6 W. Both have a hardness superior to feldspar. Evidently the great hardness of these alloys must be ascribed to well-defined compounds of three elements, not, as heretofore, to allotropic modifications of iron. This investigation will be extended to ferromanganese and to bronzes, containing Al and S.—Prof. Kamerlingh Onnes described the experiments on electrolytic polarisation, made by Dr. T. H. Meerbury in Prof. V. A. Julius' laboratory at Utrecht. The polarisation during the first seconds was measured with a capillary electrometer by a zero method on the Fuchs principle, the apparatus giving the means of registering the time. The maximum of Cathodic polarisation was reached one second after the beginning of the polarising current. A formula for the increase of polarisation

with time differing from that of Witkowski was deduced from theory. A careful repetition of Root's experiment on the transmission of electrolytic hydrogen by platinum foil of $\frac{3}{16}$ mm. gave a negative result. Insufficient isolation or some other error may have been the cause of what Root had observed.

BOOKS, PAMPHLETS, and SERIALS RECEIVED

BOOKS.—A Vindication of Phrenology: W. M. Williams (Chatto and Windus).—Exkursionsbuch zum Studium der Vogelstimmen: Dr. A. Voigt (Berlin, Oppenheim).—Electric Light Installations: Sir D. Salomons, Vol. 2, Apparatus. 7th edition (Whittaker).—A Manual of the Geology of India: R. D. Oldham, and edition (K. Paul).—A Manual of Ethics: J. S. Mackenzie. 2nd edition (Clive).—Primer of Navigation: A. T. Flagg (Macmillan).—Eight Hours for Work: J. Rae (Macmillan).
PAMPHLETS.—Die Abstammungslehre und die Errichtung eines Institutes für Transformismus: Dr. R. Dehla (Kiel, Lipsius und Tischer).—The Principles of Elliptic and Hyperbolic Analysis: Dr. A. Macfarlane (Boston, Cushing).—Les Femmes dans la Science: A. Rebière (Paris, Nony).
SERIALS.—Zeitschrift für Physikalische Chemie, xiii. Band, 4 Heft (Leipzig, Engelmann).—Memoirs of the Geological Survey of India. Palaeontologia Indica, series 9, Vol. 2, Part 1: The Echinoidea of Cutch: J. W. Gregory (K. Paul).—Familiar Wild Birds: W. Swainsland, Part 1 (Cassell).—Zeitschrift für Wissenschaftliche Zoologie, liii. Band, 3 Heft (Leipzig, Engelmann).—Mittheilungen der Prähistorischen Commission der Kais. Akad. der Wissenschaften, 1 Band, No. 2 (Wien, Tempsky).—Natural Science, May (Macmillan).—American Journal of Mathematics, Vol. xvi. No. 2 (K. Paul).—Quarterly Journal of Microscopical Science Special Complimentary No. dedicated to E. Ray Lankester (Churchill).—Agricultural Gazette of New South Wales, March (Sydney).—Records of the Geological Survey of India, Vol. xxvii. Part 1 (Calcutta).—Geographical Journal, May (Stanford).—Contemporary Review, May (Isbister).—New Review, May (Heinemann).—Scribner's Magazine, May (Low).—Sunday Magazine, May (Isbister).—Humanitarian, May (Sonnenschein).—Longman's Magazine, May (Longmans).—Good Words, May (Isbister).—Century Magazine, May (Unwin).—Chambers's Journal, May (Chambers).—English Illustrated Magazine, May (Strand).—Geological Magazine, May (K. Paul).—Travaux de la Société des Naturalistes à l'Université Impériale de Kharkow, tome xxvii. 1892-93.—A Manual of Orchidaceous Plants, Part x. (Veitch).—The Natural History of Plants: Prof. A. K. von Marilaun, translated by Prof. F. W. Oliver, Part 1 (Blackie).

CONTENTS.

	PAGE
The Modern Incandescent Electric Lamp	1
Algedonics. By C. Ll. M.	3
Our Book Shelf:—	
Wilder: "Physiology Practicums"	4
Hampson: "The Fauna of British India, including Ceylon and Burmah."—W. F. K.	4
Letters to the Editor:—	
Panmixia.—Prof. W. F. R. Weldon, F.R.S.	5
On some Sources of Error in the Study of Drift.—Prof. T. McKenny Hughes, F.R.S.	5
On the Tritubercular Theory.—E. S. Goodrich	6
Zoological Regions.—C. B. Clarke, F.R.S.	7
The Earthquakes in Greece.—C. Davison	7
"Vermetes."—Dr. Wm. Blaxland Benham	7
On Iron Crows' Nests.—Walter G. McMillan	8
Early Arrival of Birds.—J. Lloyd Bozward	8
Irritability of Plants.—R. M. Deeley	8
The Action of Light on the Diphtheria Bacterium.—J. Erede	8
Centipedes and their Young.—Dr. R. v. Lendenfeld	8
Marsupites in the Isle of Wight.—C. Griffith	8
Poincaré on Maxwell and Hertz	8
The Recent Work of the Cataract Construction Company	11
The Epping Forest Controversy	12
The University of London	13
Notes	13
Our Astronomical Column:—	
An Astronomical Expedition from Harvard	18
Elements and Ephemeris of Gale's Comet	18
The Hatchery for Sea Fishes, of the Fishery Board for Scotland at Dunbar. By Dr. T. Wemyss Fulton	18
The Forthcoming Congress of Hygiene and Demography	19
Sewer Gas and Typhoid Fever	19
Another New Branchiate Oligochaete. By Frank E. Beddard, F.R.S.	20
University and Educational Intelligence	20
Scientific Serials	21
Societies and Academies	22
Books, Pamphlets, and Serials Received	24