

with sodium amalgam in acid solutions gives the lactone campholide, $C_{10}H_{16}O_2$, not identical with the substance of the same composition obtained by Dr. M. O. Foster (*J. C. S.*, January 1896).—Copernicus and the geographical discoveries of his time, by M. Daubrée.—On the equation of the tides, by M. Maurice d'Ocagne.—On surfaces of lines of spherical curvature, by M. E. Blutel.—On a generalisation of the formula for the area of a spherical triangle, by M. X. Stoff.—Note on the resistance of beams, by M. Paul Toulon.—Method of measuring double refraction in monochromatic light, by M. R. Dongier.—Influence of the chemical nature of substances on their transparency to the Röntgen rays, by M. Maurice Meslans. Compounds of carbon, hydrogen, oxygen, and nitrogen are very nearly transparent for these rays, but the introduction of phosphorus, sulphur, or the halogens (especially iodine) largely increases their opacity.—Application of the method of M. Röntgen, by M. A. Londe. The dark and light parts of a photographic negative are equally transparent to the rays.—Increase of the photographic effect of the Röntgen rays by phosphorescent zinc sulphide, by M. C. Henry. It was found that by coating coins opaque to the rays with phosphorescent sulphide of zinc, photographic impressions of substances beneath the coins could be obtained, metals coated in this manner appearing to lose their opacity to the Röntgen rays.—Photographs obtained by means of the X-rays, by M. C. V. Zenger.—On a mechanical action proceeding from a Crookes' tube, analogous to the photogenic action discovered by Röntgen, by MM. Gossart and Chevallier. In attempting to show the heating effect of a Crookes' tube by means of a radiometer, it was found that the latter, instead of rotating, took up a fixed position under the control of the tube. If the radiometer arms were set in motion by heat, oscillations about this fixed direction ensued, which were the more rapid the smaller the distance between the tube and the radiometer. This force was stopped by the same media as the X-rays.—On the silicide of copper, by M. Vigouroux. Silicon and copper, heated in the electric furnace, give homogeneous products which may contain silicon up to 15 per cent. Prolonged heating at a temperature sufficiently high to drive off excess of copper, leaves the definite compound $SiCu_2$.—On the bromide and chlorobromide of thionyl, by M. A. Besson. Dry HBr, acting on $SOCl_2$ at its boiling-point, gives rise to a mixture from which $SOClBr$, $SOBr_2$, and S_2Br_2 , which can be separated by fractional distillation under reduced pressure. Thionyl bromide is not formed by the action of sulphur dioxide upon phosphorus pentabromide.—On a crystallised sulpho-phosphide of tin, by M. A. Granger. Tin sulphide, acted upon by phosphorus vapour, gives the compound $SnP_2 \cdot 2SnS$.—Oxyiodides of zinc, by M. Tassily.—Method for determining the purity of butter by means of the density, by M. R. Brullé.—Retineal stroboscopy, by M. Aug. Charpentier.—The expulsion of blood as a means of defence in some Sauterelles, by M. E. Cuénot.—On the frontal expansion of some insects of the family of the Muscides, by M. J. K. d'Herbulais. A criticism of a note on a recent communication on the same subject by M. A. Labboulbène.—On the significance of the fertilisation in the Uredineæ, by M. Sappin-Trouffy.—On the sugars produced in leaves, by M. G. Bonnier. It is shown that in many cases these sweet liquids are directly exuded from the stomata of the leaf, and are not always of animal origin. The rate of production of this vegetable honey is at a maximum during the night.—*Mucor* and *Trichoderma*, by M. J. Ray. Reply to a criticism of M. Paul Vuillemin.—The Hippurite bearing layers in the Valley of the Rhône, by M. H. Douville.—On the existence of numerous Radiolaria in the Ardèche, by M. L. Cayeux.—On the mode of formation of the auriferous minerals of the Witwatersrand in the Transvaal, by M. L. de Launay. The hypothesis of a chemical precipitation of the gold and pyrites during the actual sedimentation is shown to be the most probable.—On a hypothetical mode of formation of the auriferous conglomerates of the Transvaal, by M. E. Cumenge.—On some new and rare forms of calcite at Couzon (Rhône), by M. F. Gonnard.—On the high atmospheric pressures during the month of January 1896, by M. P. Dechevrens.

BERLIN.

Physical Society, January 17.—Prof. du Bois Reymond, President, in the chair.—Dr. Frölich spoke on the protection of physical laboratories from the effects due to electric tram-lines, and described the arrangement used by Siemens and Halske.

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This consists of two coils of wire-netting at right angles to each other, which being stretched round a wooden frame, and surrounding the instrument it is desired to protect, are put into metallic contact by a cable with the conducting rail of the tram-line. The disturbance due to the passage of a car is thus compensated, and the effect on a magnetised needle is reduced to a small percentage.

January 31.—Prof. du Bois Reymond, President, in the chair.—Dr. Kaufmann gave an elaborate demonstration of Röntgen's X-rays. He also exhibited a very striking photograph of a mouse, which showed in detail the separate vertebrae of the tail, the ribs, and other bones.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

BOOKS.—Chemistry for Engineers and Manufacturers: B. Blount and A. G. Bloxam, Vol. 1 (Griffin).—A New Natural Theology based upon the Doctrine of Evolution: Rev. J. Morris (Rivington).—Universal Electrical Directory (Alabaster).—Geology: C. L. Barnes (Rivington).—Life and Exploits of Alexander the Great: Dr. E. A. W. Budge (Clay).—Grundriss der Krystallographie für Studierende und zum Selbstunterricht: Dr. G. Linck (Jena, Fischer).—Traité des Matières Colorantes: L. Lefèvre, 2 Vols. (Paris, Masson).—Electrician Electrical Trades' Directory and Handbook for 1896 (Electrician Company).

PAMPHLETS.—Report of S. P. Langley, Secretary of the Smithsonian Institution, for the Year ending June 30, 1895 (Washington).—Classification Chart of the Commoner British Orders of Flowering Plants: W. P. Winter (Cheltenham).—Über Germinal-Selection eine quelle Bestimmt Gerichteter Variation: A. Weismann (Jena, Fischer).

SERIALS.—Journal of the Franklin Institute, February (Philadelphia).—American Naturalist, February (Philadelphia).—Journal of the Chemical Society, February (Gurney).—The Asclepiad, Vol. 44, Vol. xi. (Longmans).—Proceedings of the Physical Society of London, Vol. 14, Part 2 (Taylor).—Journal of the Institution of Electrical Engineers, No. 119, Vol. xxiv. (Spon).—Internationales Archiv für Ethnographie, Band ix. Heft 1 (Leiden, Brill).—Astrophysical Journal, February (Wesley).—Strand Magazine, February (Newnes).

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