

messages being readily received from a station 30 kilometres distant, and at the same time the regulation and adjustment of the tube is rendered much more simple.—The auto-cohesion of charcoal, and on the application of this discovery to telephonic apparatus for receiving the signals in wireless telegraphy, by M. Thomas Tommasina. A description of an instrument for receiving the Hertizian waves by means of a telephone. The apparatus is very sensitive, and works quite regularly even with such a strong current as three accumulators in series.—On a new radio-active element, actinium, by M. A. Debiere. The new element is obtained from the residues of pitchblende, and, except for its radio-activity, behaves as an impure thorium salt.—Solubility of a mixture of salts having a common ion, by M. Charles Touren. An experimental study from the Nernst point of view of the solubility of mixtures of potassium chloride and nitrate, and of potassium bromide and nitrate, the results being given graphically.—Action of hydrogen upon antimony sulphide, by M. H. Pelabon. The interaction of hydrogen and sulphide of antimony in sealed tubes at 440° showed that the composition of the gaseous mixture, hydrogen sulphide and hydrogen, was constant and independent of the amount of solid sulphide or of antimony present. At 625° the results were similar, and the inverse reaction of hydrogen sulphide upon antimony reached practically the same equilibrium.—On an arsenide of nickel, by MM. Albert Granger and Gaston Didier. Reduced nickel heated in a current of carbon dioxide carrying the vapours of arsenic trichloride gives an arsenide, Ni₃As₂.—On the biphosphide of tungsten, by M. Ed. Defacqz. By the action of dry hydrogen phosphide upon tungsten hexachloride at 450° C. a new compound, WP₂, is obtained, the properties of which are given. A chlorophosphide, a double phosphide, and another new phosphide were obtained from this.—On a new terpenic alcohol and its derivatives, by M. P. Genvesse. The new alcohol, pinenol, C₁₀H₁₆O, is obtained by the action of nitrous vapours upon pinene or essence of turpentine. A new oxime, pineonoxime, is obtained at the same time, the ketone corresponding to which is readily obtained by the oxidation with chromic acid of the pinenol.—Action of phenyl isocyanate and isothiocyanate upon the dibasic acids, by M. Elophe Bénech. The Haller reaction is a general one, and allows of the preparation of azelaic dianilide; phenyl isothiocyanate behaves like the isocyanate with fatty dibasic acids, with the exception of the malonic acids.—Influence of an active vegetation upon the formation of thuyone and thuyol, by M. Eugène Charabot.—Considerations on the differences which exist between the fauna of the Opisthobranchia of the ocean coasts of France and of the Mediterranean coasts, by M. A. Vayssière.—On the zoological affinities of the Phoronidia and Nemertinae, by M. Louis Roule.—On the embryonic development of the Cestodia, by M. G. Saint-Remy.—Sounding and analysis of the sediment of Lake Galescu in the Southern Carpathians, by MM. de Martonne and Munteanu Murgoci.—On the strata near Bray, by M. Munier-Chalmas.—Contribution to the study of the antileucocytic serums and their action on the coagulation of the blood, by M. C. Delezenne.—On the fixation of alkaline bases in the mineral skeleton of the human foetus during the last five months of pregnancy, by M. L. Hugouenq. An analysis of the changes in the ratio of soda to potash in the mineral skeleton of the foetus from the fourth to the ninth month.—On the physiological properties of nitriles, by M. Edmond Fiquet. An experimental study of the toxic effects of injections of acetonitrile, sodium cyanacetate, cinnamic nitrile, and sodium α-cyanocinnamate.—Variations in the amount of iodine present in the thyroid gland of the newly-born under divers pathological influences, by MM. Charrin and Bourcet.—Experimental reproduction of caries of the teeth, by M. J. Choquet.—On a new pathogenic microbe in the rabbit, *Bacillus myophagus cuniculi*, by M. C. Phisalix. The bacillus is found in a rare disease of the rabbit, chiefly affecting the muscles.—Heterotopic differentiation. The teratological process, by M. Étienne Rabaud.—Therapeutic action of the acid phosphoglycerides, by M. G. Bardet.

AMSTERDAM.

Royal Academy of Sciences, February 24.—Prof. H. G. Van de Sande Bakhuyzen in the chair.—Prof. Van Wyhe read a paper on a simple and quick method of preparing picocarmine.—Prof. W. H. Julius read a paper on solar phenomena considered in connection with anomalous dispersion

of light.—The following papers were presented for publication in the *Proceedings*:—Entropy of radiation (ii.), by Mr. J. D. van der Waals, jun.—A paper on the formation of trisubstituents of benzol from disubstituents, by Prof. A. F. Holleman.—Enantiotropy of tin (iv.), by Dr. Ernst Cohen.—Inquiries into the system TiNO₃+AgNO₃, by Dr. C. van Eyk. Melted mixtures of the two salts successively deposit: rhombohedral and then rhombic TiNO₃ on the TiNO₃ side, and rhombohedral and then rhombic AgNO₃ on the AgNO₃ side, while out of the mixtures of 48–52 mol. per cent. the double salt AgNO₃ is deposited, which melts at 83°. Below 27° this salt undergoes a change, either by passing into another modification or by splitting up into its components.—Rational curves in space, by Prof. Schoute.

DIARY OF SOCIETIES.

WEDNESDAY, APRIL 18.

ROYAL MICROSCOPICAL SOCIETY, at 8.—Demonstration on the Structure of some Palæozoic Plants, with Sections of the Plants thrown on the Screen: Wm. Carruthers, F.R.S.

THURSDAY, APRIL 19.

LINNEAN SOCIETY, at 8.—Alpine Vegetation of Tibet and the Andes: W. Botting Hemsley, F.R.S., and H. H. W. Pearson.—On some Mosses from China and Japan: E. S. Salmon.

FRIDAY, APRIL 20.

EPIDEMIOLOGICAL SOCIETY, at 8.30.

CONTENTS.

PAGE

Recent Books on Physics. By Prof. Hugh L. Callendar, F.R.S.	557
Two New Zoological Handbooks. By E. A. M.	559
The Teaching of Meteorology	560
Our Book Shelf:—	
Warington: "Lectures on Some of the Physical Properties of Soil."—W. S.	561
Maycock: "Electric Wiring, Fittings, Switches and Lamps"; Powell: "Electric Bells and Alarms."—D. K. M.	562
"Report of the Marine Biologist for the Year 1898. Cape of Good Hope Department of Agriculture."—E. J. Allen	562
Robb and Mirguet: "Science Course for Secondary Schools"	562
Leloutre: "L'Échappement dans les Machines à vapeur"; Jaubert: "Produits aromatiques; artificiels et naturels"	563
Wettstein: "Grundzuge der geographisch-morphologischen Methode der Pflanzensystematik"	563
Kant: "Dreams of a Spirit-Seer, illustrated by Dreams of Metaphysics"	563
Letters to the Editor:—	
On the Process of Dyeing with Woad Alone.—Dr. Charles B. Plowright	563
Illogicality concerning Ghosts.—Kumagusu Minakata	564
Fertilisation of Flowers in New Zealand.—Geo. M. Thomson	564
Jubilee of the Royal Meteorological Society	565
Progress in North-Western America. (Illustrated.) By G. W. L.	566
Eugenio Beltrami. By Prof. G. H. Bryan, F.R.S.	568
Prof. St. George Mivart. By R. L.	569
Notes	571
Our Astronomical Column:—	
Rotation Period of Venus	574
Elliptic Elements of the Variable Y Cygni	574
Photometric Observations of Mercury during Solar Eclipses	574
Variation of Latitude	574
Planetary Work at the Manora Observatory	574
The Development of Astronomy in America	574
The Flightless Rail of New Zealand. (Illustrated.)	576
University and Educational Intelligence	577
Scientific Serials	577
Societies and Academies	577
Diary of Societies	580