

South Wales.—A paper by Mr. A. Anderson was read containing the second portion of his notes on the Raptorial Birds of India.

Chemical Society, January 18.—Dr. Frankland, F.R.S., president, in the chair.—At this meeting Dr. Odling exhibited some very fine specimens of rare metals and their compounds, which had been lent to him by Dr. Richter and Dr. Theodor Schuchardt. Among these was a bar, weighing about seven ounces, of metallic indium; an element discovered a few years ago by Richter, in conjunction with Reich; also some metallic rubidium.—Dr. David Howard then read an interesting paper "On quinine and cinchonine and their salts." These alkaloids are prepared artificially, from quinine and cinchonine respectively, by the action of heat on their salts, and are isomeric with them. Quinine occurs along with the two last-mentioned alkaloids in cinchona bark, being apparently the one which is first formed during the growth of the cinchona plant.

PARIS

Academy of Sciences, January 15.—A note by M. M. Levy on a property of the focals of surfaces, was presented by M. Bertrand, in which the author puts forward the proposition that any surface and its focal intersect each other at right angles.—A note from M. Catalan, on General Didion's communication concerning the relation of the circumference to the diameter, was read, in which the authorship of similar formulæ is ascribed to Euler.—M. H. Resal communicated a memoir containing equations of the vibratory movement of a circular plate, and M. Serret a note by M. E. Ciotti on the employment of vibrating elastic plates for the realisation of a propeller, in connection with a recent communication from M. de Tastes.—A memoir on the measurement of very high temperatures, and on the temperature of the sun, by M. H. Sainte-Claire Deville, was read. The author maintained that the temperatures which may be produced and measured in the laboratory are not greatly exceeded in nature, and that the temperature of the sun is not far from 2,500–2,800° C. (= 4,532–5,072° F).—M. Delaunay read a note on the secular variations of the mean movements of the perigee and node of the moon.—M. Faye presented a note upon the investigations of Dr. Heis on meteors, which are confirmatory of M. Faye's previous communication as to the different centres of radiation observed in November last.—A letter was read from M. Janssen on the principal consequences which may be drawn at present from his observations of the eclipse of December last. (A translation of this letter will be found in another column.)—M. P. Guyot forwarded a note on a meteor observed at Nancy on the 20th of December last at 10h. 28m. A.M. This meteor passed from Cassiopeia through Perseus towards the Pleiades, near which it exploded, with a bright green light.—M. E. Becquerel presented a report on various memoirs by M. W. de Fonville regarding observations to be effected during balloon ascents. M. E. Becquerel also presented a note by M. T. Sidot on the electrification by friction of metals in sulphide of carbon, and on the decomposition of that body by light. The author finds that certain metals, especially silver, aluminium, and iron, become electrified, and produce sparks when strongly agitated with pure sulphide of carbon, and that the latter, when exposed to the light of the sun, is decomposed, producing a gas and a solid flocculent matter. The same gentleman also communicated a joint note by MM. F. Lucas and A. Cazin containing an account of some experimental researches upon the duration of the electric spark.—Notes by M. Lion and M. Diamilla Müller on the action of ecliptical conjunctions upon the elements of terrestrial magnetism were read. According to the former considerable perturbations were observed at Alençon during the eclipse of the 11th December last.—M. Tarry presented a further note on the movement of recoil of cyclones in equatorial regions.—In a paper on the combustion of carbon by oxygen, M. Dumas showed, in opposition to M. Dubrunfaut, that carbon is combustible in perfectly dry oxygen.—M. Chevreul made some remarks on this paper.—A note by MM. L. Dusart and C. Bardy on the transformation of phenole into alkaloids was presented by M. Cahours. The authors have obtained phenylamine, chloride of phenyle, and diphenylamine by the action of hydrochlorate of ammonia and fuming hydrochloric acid upon phenole.—M. P. Barbier announced his having produced cymene by treating hydrate of essence of turpentine with bromine.—A letter was read from M. V. Meyers on the reaction between sulphur and aqueous vapour in the synthesis of sulphuric acid, and on the

preparation of pure zinc by electrolysis.—An important discussion on the vexed question of spontaneous generation was raised by the reading of some reflections concerning heterogenesis by M. A. Trécul. In the discussion MM. Balard, Fremy, and Blanchard took part.—A somewhat cognate matter was also treated by M. A. Béchamp in his paper on the cause of alcoholic fermentation by beer-yeast, and on the formation of leucine and tyrosine in this fermentation.—M. C. Robin presented a note by M. S. Chantran on the fecundation of the crayfish, in which the author describes the impregnation of the ova as taking place after their expulsion from the oviducts.—A note by MM. E. Mathieu and V. Urbain on the gases of the blood, was presented by M. Cahours.

DIARY

THURSDAY, JANUARY 25.

ROYAL SOCIETY, at 8.30.—On the Absolute Direction and Intensity of the Earth's Magnetic Force at Bombay: C. Chambers, F.R.S.—On the Elimination of Alcohol: Dr. Dupré.—On the Action of Low Temperatures on Supersaturated Solutions of Glauber's Salt: C. Tomlinson, F.R.S. SOCIETY OF ANTIQUARIES, at 8.30.—Miscellaneous Communications on Objects of Mediæval Antiquity.

FRIDAY, JANUARY 26.

ROYAL INSTITUTION at 9.—On the Demon of Socrates: Archbishop of Westminster.

QUEKETT MICROSCOPICAL CLUB, at 8.

SATURDAY, JANUARY 27.

ROYAL INSTITUTION, at 3.—On the Theatre in Shakespeare's Time: Wm. B. Donne.

SUNDAY, JANUARY 28.

SUNDAY LECTURE SOCIETY, at 4.—On Ice, as a Geological Agent: A. H. Green.

MONDAY, JANUARY 29.

LONDON INSTITUTION, at 4.—Elementary Chemistry: Prof. Odling, F.R.S. ROYAL UNITED SERVICE INSTITUTION, at 8.30.—On Modern Ships of War, as illustrated by the Models in the Institution: Nathaniel Barnaby.

TUESDAY, JANUARY 30.

ROYAL INSTITUTION, at 3.—On the Circulatory and Nervous Systems: Dr. W. Rutherford, F.R.S.E.

WEDNESDAY, JANUARY 31.

SOCIETY OF ARTS, at 8.—On Individual Providence for Old Age as a National Question: G. C. T. Bartley.

THURSDAY, FEBRUARY 1.

ROYAL INSTITUTION, at 3.—On the Chemistry of Alkalies and Alkali Manufacture: Prof. Odling, F.R.S.

ROYAL SOCIETY, at 8.30.

SOCIETY OF ANTIQUARIES, 8.30.

LINNEAN SOCIETY, at 8.—On the Classification and Geographical Distributions of Composite: The President.

CHEMICAL SOCIETY, at 8.

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