

LORD KELVIN will be installed as Chancellor of the University of Glasgow in the Bute Hall on Tuesday, November 29.

PROF. WINDLE, Dean of the Medical Faculty at Birmingham University, has been appointed to the presidency of Queen's College, Cork, in succession to Sir Rowland Blennerhassett.

PROF. HARRY E. CLIFFORD has been appointed acting head of the department of electrical engineering at the Massachusetts Institute of Technology, Boston, in succession to Dr. Louis Duncan, resigned.

At a meeting of the governors of the South-Eastern Agricultural College at Wye, held on Monday, October 24, it was decided to develop further the forestry department, for which a grant will be sought from the Board of Agriculture.

MR. SIDNEY H. WELLS and the Rev. James Went have accepted the invitation of the President of the Board of Education to serve on the consultative committee in place of Prof. Henry E. Armstrong and the Rev. Dr. Gow, who retire in accordance with the terms of the Order in Council by which the committee was constituted.

YALE University, it is reported, will receive by the will of Mr. Levi Clinton Veits the sum of about 40,000*l.* We learn further from *Science* that the veterinary department of the University of Pennsylvania has received an anonymous gift of 20,000*l.*, Columbia University a gift of 3250*l.* from Mr. H. E. Garth for the establishment of a scholarship, and 2000*l.* from an anonymous donor for the purchase of books.

A WELSH national conference on the training of teachers is to be held at Shrewsbury on November 10 and 11. Representatives from the Court and Senate of the University of Wales, from the Council and Senate of each of the Welsh university colleges, from the local education authorities, the local governing bodies, as well as from the educational associations throughout Wales, are expected to be present. The conference will be fully representative, and is expected to have important results.

By the will of the late Dr. Isaac Roberts, the reversion of his residuary estate, probably between 30,000*l.* and 35,000*l.*, is to be divided equally between the University of Liverpool and the University Colleges of North and South Wales, for the purpose of founding scholarships. In the award of the scholarships preference is to be given to persons studying or intending to study astronomy, biology, zoology, botany, chemistry, electricity, geology, and physics, under conditions determined by the councils.

New physical and engineering laboratories were opened at the York Railway Institute of the North-Eastern Railway Company on October 20 by Sir Edward Grey. During the course of an address, Sir Edward Grey said he was convinced that no country was more qualified by nature and brains to make use of good scientific training than our own, and, therefore, there was all the more reason why there should be good opportunities of acquiring it. In the great struggle for success everything depended on the use made of scientific discoveries.

DR. C. POMERANZ has been appointed assistant professor of chemistry in the University of Vienna, Dr. Johannes Königsberger assistant professor of theoretical physics at Freiburg, and Dr. Paul Rabe, of Jena, has been raised to the standing of assistant professor at Jena. Profs. H. Joly (mathematics) and A. Dommer (mechanics), of Lausanne, have been raised from the rank of assistant to that of ordinary professor. Dr. Sommer has been appointed professor of mathematics at the Danzig Technical College; Dr. Kurlbaum, of the Charlottenburg National Physical Laboratory, has been appointed ordinary professor at the Berlin Technical College; and Dr. Max Bodenstern assistant professor of chemistry at the University of Leipzig.

THE meeting of teachers engaged in London polytechnics, technical institutes, and schools of art, announced in our last issue, was held at Birkbeck College on October 22, to promote an association of technical teachers for the advancement of technical education generally, interchange of ideas on methods of teaching, and the safeguarding of professional

interests. The following resolution was adopted by a large majority:—"That this meeting hereby decides to form an association of science, technological, and art teachers engaged in the London polytechnics, technical institutes, and schools of art, such association to comprise both permanent staffs and evening teachers, other than those engaged in purely secondary work." An executive committee of fifteen members was appointed to draft rules and constitution, and to report to a general meeting to be held in January.

A COPY of the prospectus for 1904-5 of the Leith Nautical College has been received. The college is devoted wholly to technical instruction in subjects directly connected with the sea. It is equipped with physical and mechanical laboratories and appliances for every branch of nautical education. Experimental work is provided in magnetism and electricity in regard to their seafaring application, in the teaching of seamanship, and in shipbuilding. The teaching arrangements are framed to suit the needs of the migratory seafaring community; for students can enter at any time, and can attend for long periods or for recurring short periods, as may be convenient to them. The work of the college, as the programme of instruction shows, is in no way limited by the requirements for the Board of Trade examinations, but every facility is offered in the numerous subjects of a higher naval education. Among courses of study included in this programme may be mentioned those on oceanic meteorology and instruments, with the bearing of meteorological elements on ocean routes, and on ship manoeuvring in cyclones; on shipping and commercial law, including the commercial duties of a shipmaster; and on ship surgery, medicine, and hygiene at sea. Special classes have been arranged for fishermen in fisherman's navigation, weather knowledge, knotting and splicing, and in rigger's work.

SOCIETIES AND ACADEMIES.

PARIS.

Academy of Sciences, October 17.—M. Mascart in the chair.—On the four first numbers of the photographic catalogue of the heavens published by the Observatory of Toulouse: M. Loewy. The parts now published contain the rectilinear coordinates of 32,275 stars, obtained from 186 negatives. The introduction to vol. ii., by M. Baillaud, also gives a complete account of the method of reduction followed at Toulouse, as well as of the special methods used in the measurements of the coordinates and for the calculation of the constants. An account is also given of the method adopted for measuring the relative magnitudes of the stars and of an experimental study of the photographic objective employed. Statistical studies made at the Observatories of Oxford, Toulouse, and Potsdam have shown that the mean distribution of the star images in the negatives of the catalogue is not uniform, and prove that the focal surfaces of the six objectives studied (Algeria, Oxford, Paris, Potsdam, San Fernando, and Toulouse) have an appreciable curvature.—The study of the third group of air bands with a strong dispersion: H. Deslandres and A. Kannappell. A detailed description is given of the study of the third group of air bands occupying the more refrangible half of the ultra-violet region (λ 3000 to λ 2000). The general result confirms the conclusions arrived at in 1885, each band under strong dispersion being always formed of eight series of rays in arithmetical progression. A drawing is given for the band λ 2370, in which this structure is clearly shown.—On a new system of micrometers: G. Millochau. The wire micrometer, which is attended with certain inconveniences, is replaced by an instrument based on the principle of the heliometer. Two identical plates of glass with parallel faces are placed in a plane perpendicular to the optical axis of the telescope employed, between the objective and the eye-piece. The plates turn round a common axis and give rise to a double image of the star, the distance between the two images being practically independent of small displacements of the telescope.—Observations of the sun made at the Observatory of Lyons with the 16 cm. Brunner equatorial during the second quarter of 1904: J. Guillaume. The results are summarised in three tables giving the number of spots, their distribution

in latitude, and the distribution of the faeculae in latitude.—The elements of molecular vibrations in relation with the sense of propagation of sound waves: L. **Bard**. In view of the impossibility of explaining the orientation of sound by the ear by the usual theories, the author propounds two hypotheses to explain this.—Researches on the boiling points of mixtures of volatile liquids: C. **Marie**. The boiling point constants of a given pair of volatile liquids and a non-volatile substance being given, the question is raised as to whether it is possible to calculate, *a priori*, the value of the boiling point constant corresponding to the mixture. This calculation has been made by Nernst, and an experimental study of this formula has been made by the author with mixtures of water and alcohol and resorcinol. The divergence between the theory and the results of the experiments is considerable, and an examination of the fundamental assumptions used in the formula is made to see if the cause of the divergence can be elucidated. Further experiments are required before the theory can be completely made out.—The action of solutions of organomagnesium compounds on the halogen derivatives of phosphorus, arsenic, and antimony: V. **Auger** and M. **Billy**. Phosphorus trichloride reacts violently with solutions of magnesium methyl iodide, giving the chloride of tetramethylphosphonium, phosphorus iodide, and magnesium chloride. With chloride of arsenic the chief product of the reaction is trimethylarsine oxide; with antimony trichloride several substances are formed, from which, by treatment with potassium iodide, the iodide of ethylstibine can be isolated.—On an organic persulphate: R. **Fosse** and P. **Bertrand**. The sulphate of dinaphthopyranol, obtained by treating dinaphthopyranol with dilute sulphuric acid, possesses oxidising properties, setting free iodine from an acidified solution of potassium iodide, and oxidising alcohol to aldehyde. It thus appears to be a true persulphate, analogous in composition with Caro's acid.—The constitution of rosaniline salts and the mechanism of their formation: Jules **Schmidlin**.—Anthracene tetrahydride and octahydride: Marcel **Godchot**. These hydrides have been obtained by applying the method of Sabatier and Senderens. The octahydride is the more stable of the two, and is the main product when the hydrogenation is carried out at 200° C. The oxidation products and the reactions with the halogens have been studied.—On the origin of the carbonic acid of the seed during germination: Edouard **Urbain**. It is established that the carbon dioxide is produced at the expense of the albuminoid materials of the seed.—Study on the successive states of plant material: Eug. **Charabot** and Alex. **Hébert**.—Vital periodicity of animals submitted to the oscillations of level in deep sea: Georges **Bohn**.—The agglutinating cells in the Eolidia: Paul **Abric**.—Description of some new species of trypanosomes and parasitic Hæmogregarina of marine Teleostea: E. **Brumpt** and C. **Lebailly**.—On the auxospores of two pelagic diatoms: J. **Pavillard**.—The geology of the Ortler region: Pierre **Termier**.—On macles: G. **Friedel**.

DIARY OF SOCIETIES.

FRIDAY, OCTOBER 28.

PHYSICAL SOCIETY, at 5.—An Interference Apparatus for the Calibration of Extensometers: John Morrow and E. L. Watkin.—A Sensitive Hygrometer: Dr. W. M. Thornton.—Note on a Property of Lenses: Dr. G. E. Allan.

SATURDAY, OCTOBER 29.

ESSEX FIELD CLUB, at 6.30 (at Essex Museum of Natural History, Stratford).—Fresh-Water Biological Research and Biological Stations: D. J. Scurfield.

TUESDAY, NOVEMBER 1.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Inaugural Address by the president, Sir Guilford L. Molesworth, K.C.I.E.—Presentation of the Council's Awards, and Reception in the Library.

WEDNESDAY, NOVEMBER 2.

SOCIETY OF PUBLIC ANALYSTS, at 8.—The Detection and Estimation of Small Quantities of Maltose in the Presence of Dextrose: Julian L. Baker and W. D. Dick.—The Use of Palladium-Hydrogen as a Reducing Agent in Quantitative Analysis: Alfred C. Chapman.—Some Recent Abnormal Milk Results: Sidney Harvey.

ENTOMOLOGICAL SOCIETY, at 8.

THURSDAY, NOVEMBER 3.

CHEMICAL SOCIETY, at 8.—Note on the Action of Nitric Acid on the Ethers: J. B. Cohen and J. Gatecliff.—The Condensation of Formaldehyde with Acetone (Preliminary Note): E. A. Werner.—Union

of Hydrogen and Chlorine. Rate of Decay of Activity of Chlorine: J. W. Mellor.—The Action of Phthalic Anhydride on α -Naphthylmagnesium-bromide: S. S. Pickles and C. Weizmann.—The Constitution of Nitrogen Iodide: O. Silberrad.—The Available Plant Food in Soils: H. Ingle.—The Combustion of Ethylene: W. A. Bone and R. V. Wheeler.—The Decomposition of Methylurea: C. E. Fawsitt.—The Influence of Certain Salts and Organic Bodies on the Oxidation of Guaiacum: Miss E. G. Wilcock.—The Influence of Potassium Persulphate on the Estimation of Hydrogen Peroxide: J. A. N. Friend.—The Dynamic Isomerism of α - and β -Crotonic Acids (Preliminary Note): R. S. Morrell and E. K. Hanson.—The Influence of Sunlight on the Dissolving of Gold in an Aqueous Solution of Potassium Cyanide: W. A. Caldecott: (x) The Fractional Hydrolysis of Amygdalonic Acid; (2) Isoamygdaline: H. D. Dakin.

RÖNTGEN SOCIETY, at 8.15.—The Presidential Address: C. Thurston Holland.

FRIDAY, NOVEMBER 4.

GEOLOGISTS' ASSOCIATION, at 8.—Conversazione.

MONDAY, NOVEMBER 7.

ROYAL GEOGRAPHICAL SOCIETY (Albert Hall), at 8.30.—The Work of the National Antarctic Expedition: Captain R. F. Scott, R.N.

TUESDAY, NOVEMBER 8.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Coast Erosion: A. E. Carey.—Sea-Coast Erosion on the Holderness Coast of Yorkshire: E. R. Matthews.

FRIDAY, NOVEMBER 11.

ROYAL ASTRONOMICAL SOCIETY, at 5.

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