

be shown to an audience, as the opaque deposit over the greater part of the tube obscures them.

It has only been possible this evening to bring forward a selection of the results of two years' work on this subject at the Imperial College, with generous help from colleagues, and facilities provided by the governors.

Let me conclude by reading to you a prophetic passage from one of Faraday's letters to Schönbein:—"What of nitrogen? Is not its apparent quiet simplicity of action all a sham? Not a sham, indeed, but still not the only state in which it can exist. If the compounds which a body can form, show something of the state and powers it may have when isolated, then what should nitrogen be in its separate state? You see I do not work; I cannot. But I fancy, and stuff my letters with such fancies (not a fit return) to you."

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

A NEW chair of bacteriology is to be founded in Edinburgh University under a bequest from Mr. Robert Irvine, of Royston, Granton. At his death, eleven years ago, Mr. Irvine bequeathed 230 shares of 10*l.* each in a company for developing the resources of Christmas Island for the purpose of establishing the chair when the interest from the shares should reach 25,000*l.* or 30,000*l.* The accumulated dividends on these shares now reach more than 30,000*l.* It is understood that 25,000*l.* will go towards the maintenance of the professorship, and that the remaining 5000*l.* will be used in providing the class-rooms, laboratories, and the necessary equipment.

ATTENTION has already been directed to the progress which has been made in the provision of well-equipped laboratories for the study of electrical technology and kindred subjects in the University of Hong Kong. Prof. C. A. Middleton Smith has sent us an exhaustive list of engineering and other equipment which has been presented to the University by public-spirited manufacturing firms. Their generous support of the cause of higher technical education in the distant parts of the Empire is sure to be productive of excellent results, and is worthy of emulation by other firms. The greatest support seems to have been received for the department of heat engines, and the authorities in Hong Kong hope that more offers of apparatus will be received from firms interested in electrical engineering. A complete equipment is required for experiments in all branches of electrical work, and an appeal is made to manufacturers that this branch of engineering shall be represented worthily in the equipment presented to the University. It is impossible here to mention each of the gifts which have been made, but as indicative of the substantial character of the gifts, the complete spectrographic outfit presented by Messrs. Adam Hilger and Co., and the Sankey's hand-bending testing machine given by Mr. Casella, may be mentioned.

SOCIETIES AND ACADEMIES.

LONDON.

Physical Society, April 25.—Prof. C. H. Lees, F.R.S., vice-president, in the chair.—W. R. Bower: A graphical method of optical imagery. The paper contains a development of optical imagery based on elementary geometry, including limiting positions, but excluding cross-ratios, centres of perspective, &c. The method

adopted is useful for teaching the properties of optical systems to those who are not essentially students of pure mathematics, and can be satisfactorily used by those capable of draughtsmanship with mathematical instruments.—Dr. C. V. Burton: The spectroscopic resolution of an arbitrary function. An ordinary grating has periodic rulings, and a spectrum obtained by means of it is characteristic of the radiation entering the spectroscope-slit. But if the radiation is homogeneous, while the distribution of the rulings is arbitrary, we obtain a spectrum characteristic of the grating. It is thus found to be theoretically possible to resolve spectroscopically a given arbitrary function $\phi(x)$ into its harmonic constituents. The theory of the proposed method of resolving functions is discussed, and is as complete as that of ordinary spectroscopy, while in one respect it is more simple; for, since the light entering the spectroscope-slit is entirely of one wave-length, the comparison of intensities of spectral lines (whether visually or photographically) is facilitated.

Linnean Society, May 1.—Prof. E. B. Poulton, F.R.S., president, in the chair.—Prof. P. Groom and W. Rushton: The structure of the wood of East Indian species of *Pinus*.—Dr. Winifred Brenchley: Branching specimens of *Lyginodendron oldhamium*, Will.—A. C. F. Morgan: A problem in Weismannism.—Mrs. L. J. Wilmore: *Sphenopus marsupialis*.—Papers on collections made by the Percy Sladen expedition to the Indian Ocean:—Miss Helen L. M. Pixell: Polychæta of the Indian Ocean, with some species from the Cape Verde Islands. The Serpulidæ, with a classification of the genera *Hydroides* and *Eupomatus*.—S. Hirst: Report on the Arachnida of the Seychelles.—Miss Marjorie Lindsay: *Gypsina plana*, Carter.—A. Grouvelle: Nitidulæ, Heterocidæ.—A. Raffray: Pselaphidæ de l'Archipel des Seychelles.—Dr. K. Jordan: Anthribidæ of the Seychelles.—S. Maulik: Hispinæ from the Seychelles.—Dr. K. Jordan: Certain changes in nomenclature of Lepidoptera proposed by Dr. Verity.

Zoological Society, May 6.—Dr. Henry Woodward, F.R.S. vice-president, in the chair.—Dr. F. E. Beddard: The anatomy and systematic arrangement of the Cestoidea. This paper, the tenth of the series, contained an account of two species of tapeworms found in a Dongolan genet, both of which were described as new, one being made the type of a new genus.—J. A. Milne: Pacific salmon: an attempt to evolve something of their history from an examination of their scales. Reasoning from the similarity of their appearance to the scales of the other Salmonidæ, the author pointed out that all the migratory species except *Onchorhynchus kita* remain for at least a year in fresh water before proceeding to the sea—in the Fraser River district, at any rate. He also showed the scale of a quinnat, and pointed out that it was scarcely possible to avoid the conclusion that that fish had already spawned once before it was captured.—Miss Kathleen Haddon: Notes on *Peripatoides woodwardii*, Bouvier. This paper was based on material collected in Western Australia, consisting of twenty specimens, male and female, ranging in size from 17 to 46 mm., thus considerably exceeding in length those described by Prof. Bouvier. Various types of coloration are exemplified, some being blue-green with small yellow spots, while others have the yellow pigment increased so as to give a tawny appearance to the animal; a dark variety of this latter type also occurs.—J. C. F. Fryer: Field-observations on the enemies of butterflies in Ceylon. It was concluded (1) that in Ceylon, with the exception of the