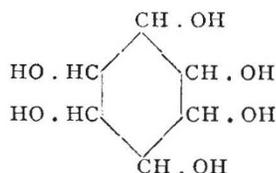


have not been accepted without an examination. Thus it is pointed out that the large proper motion given by Arago in his "Popular Astronomy" for the star in Argus, No. 2151 B. A. C., should be rejected, the comparison of Lacaille's observations with those of Stone and Gould giving, in fact, a motion of about $0''.2$ for this star. The magnitude, co-ordinates for 1890.0, proper motion in right ascension and declination, the resultant motion, the direction of this motion, and the authority are given for each star.

OPTICAL ISOMERIDES OF INOSITOL.

DURING the last few months, whilst the brilliant researches of Prof. Emil Fischer on the synthetical production of the glucoses have been attracting so much attention, some very interesting work has been done on a compound which was formerly supposed to belong to the glucose group, viz. inosite. Maquenne, in 1887, showed that this compound, which is fairly widely distributed throughout the animal and vegetable kingdoms, is not a sugar, but a hexahydroxy-derivative of hexamethylene, having the constitutional formula—



It is an alcohol, and in accordance with the usual English nomenclature the name inosite must therefore be altered to inositol.

M. Maquenne has recently examined a compound obtained from the manna-like exudation of one of the Californian pines (*Pinus lambertiana*), and termed β -pinitol. He found that its formula is $\text{C}_7\text{H}_{14}\text{O}_6$, and that on heating with hydriodic acid it is resolved into methyl iodide and a substance which has the same composition as inositol, and resembles it in most of its properties, but melts at a higher temperature and rotates the plane of polarization to the right ($[\alpha]_D = 65$), inositol being inactive. It is therefore called *dextro-inositol*. Almost simultaneously, another French chemist, M. Tanret, obtained from quebracho bark (*Aspidosperma quebracho*) a sugar-like compound to which he has given the name quebrachitol. It has the same formula as β -pinitol, and on treatment with hydriodic acid yields methyl iodide and an inositol which can only be distinguished from the foregoing by its action on the plane of polarized light which it rotates to the left to the same extent as the first compound does to the right, and must therefore represent the *levo-inositol*. Both these compounds crystallize with two molecules of water in hemihedral crystals, and are very soluble in water.

MM. Maquenne and Tanret then jointly examined the effect of mixing concentrated solutions of equal weights of the dextro- and levo-compound, and obtained an inactive inositol, which is much less soluble in water than either of its constituents, and melts at a higher temperature (253°), without previously becoming plastic. From its mode of formation, its constitution must resemble that of racemic acid, and the name *racemo-inositol* has therefore been given to it. It is not identical with the inactive inositol previously known, and the latter must therefore have an analogous constitution to mesotartaric acid.

We have therefore the interesting result that inositol, a derivative of hexamethylene, exists in four different forms, corresponding exactly to those of tartaric acid.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

CAMBRIDGE.—Mr. Buchanan, the University Lecturer in Geography, announces a course on "Oceanography," to begin at 2.15 p.m. on Wednesdays. The subject will be "The Distribution of Land and Water on the Globe."

The Council of the Senate have published a report in which they withdraw their original proposal (October 22, 1888) to suspend for 10 years from 1890 the augmentation of the contributions of Colleges to the Common University Fund pre-

scribed by the present statutes, by way of relief to the depressed finances of some of the Colleges. They propose now to discriminate between Colleges that are financially depressed and those that are not. The latter will receive no relief under the new plan, the former will be allowed to make up their University contributions by devoting one or more Fellowships to University purposes. This proposal seems to have been much more widely approved than the former, and is signed by nearly all the members of the Council of the Senate.

The Special Boards for Physics and Chemistry, and for Biology and Geology, propose a new departure in the conduct of the second part of the Natural Sciences Tripos, with regard to which there are likely to be differences of opinion. Hitherto all the work considered by the examiners has been carried on at the time of the examination under their supervision, and under equal conditions for all candidates. The proposal now is to give credit for work in practical chemistry carried on before the examination in the University or College laboratories. The regulations recommended are:—

"In the second part of the examination, every candidate in chemistry may present to the examiners, at the commencement of the examination, a record of the chemical work which he has carried out in the University laboratory, or in some one of the College laboratories, in some one term. Such record shall be the original notes made from day to day in the laboratory, with the necessary calculations in full, and dated so as to show the work of each day.

"To the record shall be appended a certificate, signed by the candidate and by the superintendent of the laboratory, stating that all the manipulations involved in the work have been *bonâ fide* carried out by the candidate alone, and that the superintendent has watched the progress of the work and believes the record of it to be faithful.

"In estimating the merits of the candidates, the examiners shall give credit for such work.

"This regulation shall be first applicable to the examination for the Natural Sciences Tripos of the year 1892."

The Report is signed by 12 members of the two Boards, the total number of members being 31. The chemists whose names appear are Prof. Liveing, Dr. Ruhemann, and Dr. Tilden.

Mr. J. Pedrozo d'Albuquerque, B.A., Scholar of St. John's College, First Class, Natural Sciences Tripos, 1887–88, has been appointed Government Professor of Chemistry at Barbadoes.

Applications for permission to occupy the University's tables in the Zoological Station at Naples, and in the Marine Biological Laboratory at Plymouth, are to be sent to Prof. Newton, Magdalene College, Cambridge, on or before May 22.

The Newall Telescope Syndicate have issued a further Report, in which it appears that a means has been found for overcoming the threatened financial difficulty. Mr. H. F. Newall, M.A., of Trinity College, University Demonstrator of Experimental Physics, and son of the donor of the telescope, has offered his services as observer, without stipend, for five years, a sum of £500 for initial expenses, and a guarantee of £200 a year for five years for maintenance, provided the University can furnish the balance of the funds required. He also offers to build himself a private house near the new Observatory, if a suitable site can be found. The Sheepshanks Fund is, moreover, able to promise an additional sum of £100 a year after five years from the present date. The outcome of these offers is that the University will only be required to find at present a capital sum of £125, and an annual subsidy of £30. After five years, it may have to build an observer's house at a cost of £800, and provide £150 a year towards his stipend. Mr. Newall has worthily seconded his father's munificence, and it is to be hoped that no further obstacle will arise to the founding of an adequate observatory of stellar physics in Cambridge.

SOCIETIES AND ACADEMIES.

LONDON.

Royal Society, March 13.—"The Nitrifying Process and its Specific Ferment." By Percy F. Frankland, Ph.D., B.Sc. (Lond.), A.R.S.M., &c., Professor of Chemistry in University College, Dundee, and Grace C. Frankland. Communicated by Prof. Thorpe, F.R.S.

The authors have been engaged during the last three years in endeavouring to isolate the nitrifying organism.

Nitrification, having been in the first instance induced in a