valuable *résumé* of this work, collecting together, from his many articles, the best methods of preparing each compound of the class, and in many cases adding much hitherto unpublished information. The *résumé* will be of the greatest help to all future workers in this interesting field, for much as has been done by Dr. Gibbs, Professor Jörgensen and others, the ground can be said to be hardly more than broken.

A PRACTICALLY new field has been opened in the same number of the *Zeitschrift*, by Professor Sabanejeff, of Moscow, that of structural isomerism in inorganic compounds. While there seems to be no inherent reason why structural isomers, which are so familiar in organic chemistry, should not exist among inorganic compounds, no undoubted cases have hitherto been proved. The two isomeric sodium potassium sulfites $NaKSO_3$ and thiosulfates $NaKS_2O_3$ of Röhrig and of Schwicker are doubtful, and Hantzsch has shown that the two nitramins NH_2NO_2 are rather stereoisomers than structural isomers; indeed, Hantzsch says that it seems probable that structural isomerism is perhaps confined to the compounds of carbon. Sabanejeff has attacked this problem with great success, and his first article deals with salts of ammonium, hydroxylamin and hydrazin. He describes seven pairs and one triplet of structural isomers, three of the fifteen compounds being new and nine never before analyzed. Among the pairs are hydroxylamin hypophosphite, NH_3O,H_3PO_2, and acid ammonium phosphite, $NH_3H_3PO_3$; hydrazin phosphite, $N_2H_4H_3PO_3$, and acid ammonium amidophosphate, $NH_2PO(OH)_2$-NH_3; and the triplet, ammonium oxyamidosulfonate, $NH(OH)SO_3H.NH_3$, hydroxylamin amidosulfonate $NH_2SO_3H.NH_3O$, and hydrazin sulfate, $N_2H_4H_2SO_4$. In all these cases the salts are well characterized and stable. This work is of great importance, as it settles the fact that structural isomerism is a general property and not peculiar to the compounds of carbon.

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CURRENT NOTES ON ANTHROPOLOGY.

CRANIOLOGICAL OPINIONS.

THE subject of craniology in its relation to anthropology is taken up by Dr. R. Lehmann-Nitsche in an article in the *Revista del Museo de la Plata* (Tom. IX., 1898). After some preliminaries, he points out with distinctness the inability of a single physical peculiarity, such as the cranial index, to fix racial lines; and draws a comparison between the two theories most recently propounded, the one by Wilser and the other by Sergi, showing how they are in absolute contradiction.

His conclusion is that 'craniology, as at present studied, is incapable of defining typical or racial characteristics.' Much of this, he argues, is due to a confusion of biological and racial factors of development.

Dr. Marina, in his 'Studii Antropologici' (Torino, 1897), concludes with the affirmation: "The terms 'leptoprosopic' and 'chamæprosopic,' no more than those of 'dolichocephalic' and 'brachycephalic,' are competent for distinguishing the varieties and types of the human skull."

Some may remember that in a work published eight years ago I advanced precisely this opinion about craniology ('Races and Peoples,' pp. 19, 20).

ANCIENT GRAVES IN MAINE.

DR. CHARLES C. WILLOUGHBY, chief assistant in the Peabody Museum, in Vol. I., No. 6, of the 'Archæological Papers' published by the Museum, gives a careful account of his investigations of the prehistoric burial places along the coast of Maine. It is well illustrated, with four plates and fifty drawings in the text.

The graves differed in age. Beads of na-

tive copper were found in one, with fragments of bone. In others the bones had entirely disappeared. There was no pottery, but well-made, polished and chipped stone implements (as arrow-points, knives, celts, gouges and pendants) were abundant. Iron pyrites for 'firestones' and red ochre for paint were quite common.

Both Dr. Willoughby and Professor Putnam (who contributes a prefatory note) express a doubt that these were Algonquian graves. They suggest the Beothucs of Newfoundland as their possible constructors.

GEOGRAPHY AND ANTHROPOLOGY.

This autumn the Geographical Institute of Brussels, a branch of the 'Université Nouvelle,' begins its courses of instruction. It offers a three years' course in geography and expects to grant a diploma.

It is interesting to note the position assigned to anthropology in this course. In the first year it divides with biology one hour a week; in the second and third year it has one hour a week to itself, and in the third year ethnography has also an hour; these out of about fifteen instruction hours weekly. The professor of this course is not named in the preliminary announcement.

This is perhaps as much as can be expected at present; but it seems still remote from the definition of geography given by Dr. Hugh R. Mill some years ago—'the description of the earth in relation to man.'

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SCIENTIFIC NOTES AND NEWS.

A NATIONAL PHYSICAL LABORATORY FOR GREAT BRITAIN.

The report of the committee appointed by the Treasury to consider the desirability of establishing a national physical laboratory was issued on October 4th. The Treasury minute appointing the committee was dated August 3, 1897, and was as follows:

To consider and report upon the desirability of establishing a national physical laboratory for the testing and verification of instruments for physical investigation; for the construction and preservation of standards of measurement, and for the systematic determination of physical constants and numerical *data* useful for scientific and industrial purposes; and to report whether the work of such an institution, if established, could be associated with any testing or standardizing work already performed wholly or partly at the public cost.

The committee consisted of Lord Rayleigh (chairman), Sir Courtenay Boyle, Sir Andrew Noble, Sir John Wolfe Barry and Messrs. W. C. Roberts-Austen, Robert Chalmers, A. W. Rücker, Alexander Siemens and T. E. Thorpe.

The committee review the existing institutions in Great Britain and state:

After consideration of the evidence the committee have come to the conclusion that an institution should be established for standardizing and verifying instruments, for testing materials, and for the determination of physical constants. Work useful both to science and industry could therein be performed for which no adequate provision is at present made, either in this country or at the Bureau International des Poids et Mesures. Such work could not, or, at all events, in all probability would not, be undertaken by individual workers or by institutions primarily devoted to education. In the opinion of the committee the proposed institution should be established at the national expense on lines similar to, though not at present on the scale of, the Physikalisch-technische Reichsanstalt.

The conclusions of the committee are as follows:

1. That a public institution should be founded for standardizing and verifying instruments, for testing materials, and for the determination of physical constants.

2. That the institution should be established by extending the Kew Observatory in the Old Deer Park, Richmond, and that the scheme should include the improvement of the existing buildings, and the erection of new buildings at some distance from the present observatory.

3. That the Royal Society should be invited to control the proposed institution, and to nominate a governing body, on which commercial interests should be represented, the choice of the members of such body not being confined to Fellows of the Society.