

signs becomes $(1, -2)$, which is the positive electron. The neutron is $(0, 1)$, since the general formula for any nucleus is $(np)_z n_1$ or $H_z^0 n_1$ in which n is a neutron, and the atomic number Z for the neutron is zero.

WILLIAM D. HARKINS

UNIVERSITY OF CHICAGO

ISOTOPIC NOMENCLATURE

THERE has been an increasing amount of discussion relative to suitable words and symbols for the designation of isotopes. Already the words "protinium" and "deuterium" have been used to denote the hydrogen isotopes of mass 1 and 2, respectively. Also the formula of ammonium containing one atom of hydrogen of mass 2 has been written NH_2D and $NH_2\bar{H}$.

At present experimental evidence points to the fact that many of the elements are composed of at least three isotopes. Furthermore, it appears to be only a matter of time before many of the isotopes will be prepared in a pure state and in sufficient quantity to examine their properties. In the meantime, however, considerable confusion may arise, assigning to isotopes symbols and names which are not only at variance with common usage but will also tend to create an elaborate nomenclature.

Two examples should serve to make this point clear. There are at present at least 80 isotopes known. First, if each of these isotopes is assigned a name unassociated with its element the memory of the average chemist will be greatly taxed. Second, if we assign a numerically derived name, such as "protinium" or "deuterium," we might call an isotope of mass 86 *hakloskyhogdoekostium* (*ἑκτος καὶ ὀγδοηκοστός*) and yet be uncertain, unless the context supplied the information as to whether isotope of mass 86 of strontium or krypton was meant, for both have an isotope of this mass.

It would seem to the writer to be more advantageous for the present to run the risk of being verbose but exact and designate an isotope as follows: Hydrogen of mass 2, or oxygen of mass 17, and use the simple words hydrogen, oxygen, strontium, etc., to designate the usual isotopic mixture found of the element in question. If the amounts of the isotopes have been varied to a marked degree, then write out the percentages of the various isotopes present.

In chemical formulas the use of the symbol of the element together with the suitable number or numbers in exponential position, and with the use of structural formulas to clarify isomeric relationships would still appear advisable, rather than injecting new symbols or signs just at present.

And last but not least it is recommended that a suitable international committee be appointed which

would rule upon changes in nomenclature, should the occasion arise, and thereby avoid getting into a confused nomenclature such as the one in organic chemistry, from which we are now being rescued by the Commission on the Reform of the Nomenclature of Organic Chemistry.

J. B. FICKLEN

HARTFORD, CONN.

REACTION TO MOSQUITO BITES FOLLOWING TREATMENT FOR COLD IN HEAD

FOR some years past the writer has been raising mosquitoes for experimental purposes. These have been fed on the forearm, and no ill effects have been observed. There has been practically no swelling or discomfort, and within a very few minutes the slight redness at the site of the puncture disappeared. Recently the writer contracted a severe cold in the head, and on advice, took alkaline salts as a treatment. A teaspoonful of Citro Carbonate of Magnesia was taken every hour for several hours, so that the urine gave an alkaline reaction on litmus paper. At this time the mosquitoes were fed as usual, and within ten minutes, at the site of every puncture, appeared a white swelling, six to ten millimeters in diameter, surrounded by a red aureole and accompanied by an almost intolerable itching. These swellings lasted for about half an hour and gradually disappeared. During the time the system was alkalized, each feeding was followed by the appearance of these swellings, accompanied by intense discomfort. At the time of writing, three weeks after the last dose of Citro Carbonate of Magnesia, the mosquitoes are still being fed, but once more without the occurrence of swellings, discoloration or itching. The mosquitoes, *Aedes egypti*, emerged in December, and the same individuals were used during the whole time covered by these observations. The writer is curious as to the connection between this treatment for cold and the reaction to the mosquito bites which followed.

G. ALLEN MAIL

MONTANA AGRICULTURAL EXPERIMENT
STATION
BOZEMAN

MORTALITY AMONG TROPICAL FISH

A HIGH infant and adult mortality rate among different varieties of tropical fish was completely checked by the addition of viosterol to a diet already containing desiccated shrimp, beetle and ground fresh liver. Deeper pigmentation and increased activity were noted. Several fish whose vertebral columns had softened and deformed recovered their rigidity after addition of the viosterol. However, the deformity persisted.

The viosterol and its oily medium were mixed with