

## Letters to the Editor

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## Designation of Heavy Hydrogen

IN a recent issue of NATURE (132, 955; 1933) Lord Rutherford has suggested that the heavy isotope of hydrogen be named diplogen, instead of the name deuterium proposed by us. This was one name considered by us before we published our suggestion of the names protium and deuterium for the two isotopes of hydrogen.

Our objection to this name arises from the difficulty of naming compounds which contain two of the heavy hydrogen atoms. Thus the compound  $\text{NH}^2\text{H}_2$  would be called di-diplogen mono-hydrogen nitride. The part of this name which we think is unfortunate is the repetition of the syllable 'di' in the name, and it was for this reason that we discarded this name for the heavy isotope. Also, we believe that the two isotopes of hydrogen should be treated symmetrically, and the corresponding name, haplogen, for the hydrogen of mass 1, did not appeal to us. Moreover, both names have a rather forced meaning. 'To generate double' and 'to generate single' seem to have no evident applicability to the hydrogen isotopes such as the corresponding meaning of the word hydrogen has.

The objection to the name deuterium for the substance  $\text{H}^2$  and the name deuton for its nucleus, seems to be founded upon the possibility of confusing the word neutron and the name deuton. Perhaps the use of the name deuteron would eliminate this difficulty. It is interesting indeed that American scientific workers do not have any such difficulty so far as we are aware.

It may be of interest to readers of NATURE in connexion with the discussion of names for this substance if we list some of the names considered by us before we proposed these names. These include:

Haplogen for  $\text{H}^1$  and diplogen for  $\text{H}^2$ . These names were discarded for the reasons given above.

Hydrogen for  $\text{H}^1$  and bar-hydrogen for  $\text{H}^2$ , with the symbol H for the latter. This we discarded because it is a four-syllable word and because people generally seemed to dislike the sound of it. Thus di-bar-hydrogen would occur in some chemical compounds and the two prefixes seem very awkward.

Barogen for  $\text{H}^2$  and pycnogen for  $\text{H}^2$ . Both these names were eliminated because they did not sound euphonious and also because we feared that it was emphasising the increased density of the compounds too much.

Iso-hydrogen for  $\text{H}^2$ . This was eliminated because the term iso is a common term for naming organic compounds.

Dygen for  $\text{H}^2$ . We eliminated this name because of the impossibility of making any of the usual chemical combining terms.

We finally agreed upon the names protium and deuterium because they place the two isotopes of hydrogen as equal, both being hydrogen, and because of their meaning as first and second, and because we

felt they were the most descriptive of these names. We were influenced in the selection of deuterium by the preference of others for the name deuton, though we preferred to use the entire Greek stem rather than to abbreviate it.

As Lord Rutherford states, the question of naming this isotope is so important that a general discussion of the name is very desirable at this time. We are not only giving a name to a single isotope, but we are perhaps also introducing a system for naming other isotopes in the future. Whatever names are finally selected, we do believe that both isotopes of hydrogen should be named and the name hydrogen be used to apply to both of them, and that this principle be adhered to in the future in naming any other isotopes. This question of course is not important at the present time, but we think that it would be too pessimistic to believe that other isotopes will not be separated in quantity in the future.

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CHEMISTS cannot admit such fearsome wild fowl as *Diplogen* to their sanctuary of elements—elements no longer, subject as they are to protono-decapitation and reheading to satisfy simple sums. Diplogen is an offence against the usages of the house chemical, philologically unsound and bereft of reason. The *gens* are all gentles with specific functions: hydrogen the *gen* of water; oxygen the *gen* of acid; nitrogen the *gen* of nitre. Diplogen, the *gen* of twins, can have no place in such company. *Diplogin*, if you will, as it has so gone to the heads of physicists—but *Diplogen*, never! It's a twin not a twinner. Fish will leave the waters, if they learn that such a monster is around.

Why not simply *Deuthydrogen*, as it is the second term in the hydrogen series? Should a Triton appear among these minnows, it will be Trithydrogen. We shall then be naming it in accordance with the principle adopted in homologous hydrocarbon series. After all, the American parents alone have the right to decide what the child's name shall be—whatever Dr. Aston may assert. Still, he is scarcely to be ranked as an authority—as he will not recognise distinction between 'composition' and 'constitution'. Much measuring has made him oblivious of meanings.

We notice elsewhere a suggestion of the name *Woollywestium*, Ww. Such a name would invite its wearing next the skin, whilst taking cognisance of a Californian birthplace.

We cannot allow physicists to muddle our language: as they have done in their varied misuse of Faraday's incomparable term ion; in their continued failure to distinguish between atom and molecule—to give only two examples. Their ruin of the significance of ion is a disaster, an insult to Faraday's memory; our literature is thrown into entire confusion thereby.

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