THE DENSITY OF SELENIUM

by

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HISTORICAL SURVEY

In 1840 Berzelius[1] introduced the term allotropy to denote the existence of several forms of an element, as distinguished from isomerism, which indicates the existence of different modes of combination of equal numbers of atoms of the same elements. He also stated that the different modifications of an element cannot be explained by the differences in the arrangements of the atoms, but that the differences lie in the atoms themselves. This would indicate that the allotropes would adhere to their forms, even in chemical combination.

In accordance with Avogadro's doctrine the existence of molecules of elements composed of several atoms was accepted, and therefore Berzelius' distinction between isomers and allotropes has lost its meaning. The term allotropy is retained to denote the existence of different modifications both of an element and of a compound.

Ostwald and Nernst based their definition of allotropy on energy change, while Benedick, Honda and Le Chatelier used the discontinuity of forms, phases, and physical properties as their criterion.

Allotropy is then taken as a term covering the different states of matter and also isomerism, polymerism, and polymorphism.