

no means affirms ("minime affirmo") that gravity is essential to bodies, but "vis inertiae" or "vis insita" as it is elsewhere called, is immutable. This "vis insita" he states in the Definitions is always proportional to the mass. It may also be noted that Newton does not use the word "atoms" but speaks of the smallest parts ("partes minimas"). He also employs the term undivided not indivisible—"partes indivisae."

Wilson appears to have regarded the word "massy" in the "Opticks" as redundant, yet if it be omitted, we have only four essential properties instead of the five given in the "Principia."

Dalton's genius was as quickly recognized on the Continent as in England, perhaps even more quickly. His experience on a visit to France presents another instance of noble generosity among lovers of Science. He was so warmly welcomed by the members of the French Institute, and so much more honoured than among his own countryman that on his return home, although not given to express his feelings, he said, "If any Englishman has reason to be proud of his reception in France, I am that one."

Present View of the Atom. Transformation of Matter.

The latest advance in the study of the constitution of matter is that the Daltonian atom is of a very complex nature, a kind of infinitesimal planetary system in itself, which in the case of some, at least, of the chemical elements, seventy or so in number, is breaking up by its own internal energy, projecting streams of particles, and, after a series of steps, exhibiting a veritable transformation of one element into another. In this manner uranium is the parent of radium, and radium is the parent of helium. Further changes are the subject of eager investigation which is now in rapid and breathless progress.

Many in Canada are engaged in the research, which had its origin a few years ago in the investigations that followed the discovery of the X rays, which are now so familiar to us all, and so startled us at first in exhibiting the skeleton of the hand of a living man.

Ten years ago Henri Becquerel of Paris discovered that uranium could produce in the dark, what, for want of a better word may be called photographic effects similar to those of the X-rays; the explanation being that uranium is constantly sending off invisible radiations, i.e. streams of particles, whose action is thus made visible.

M. and Mme. Curie, undertaking a patient examination of all the chemical elements in search for any with similar properties discovered radium in 1898.

The extraordinary phenomena exhibited by this and certain other elements, were linked together by the theory already given which had