

beings; the souring of milk and the fermentation of sweet juices were also known, as were changes brought about in baking clay, in burning lime, in cooking meat, in tanning hides, in working metals, and so on. The Egyptian priests made large numbers of experiments, and many chemical matters are touched upon in our own Bible. But for a very long time all these things were known merely as disconnected facts—they were not classified and no relationships were studied out, so they did not form a science.

But, by degrees, certain men began to make a special study of the metals, having a belief that it was possible to convert the ordinary, or as they called them, "base" metals (*i.e.*, those that were altered in the fire) into gold and silver, the "noble" metals (those that fire did not affect). Such a change would not only be interesting in itself, but would make the man that knew how to bring it about enormously rich—and men have always had a strong desire to be rich! The men who believed that such a change could be brought about, and who made experiments with this object in view, were called alchemists, and the change of one metal into another, which they hoped to effect, was called transmutation. Many of these alchemists were exceedingly hard-working men, and performed an enormous number of experiments; and, although they never succeeded in making gold from anything else, they did discover a large number of useful and interesting substances and processes.

The alchemists thought that transmutation was to be brought about by a wonderful substance called the "philosopher's stone," a minute quantity of which was capable of changing a very large quantity of base metal into gold or silver. They also believed in the possibility of preparing a marvellous medicine, called the "elixir of life," which would cure all diseases and endow those who employed it with perpetual youth. A third thing that many of them tried to prepare was the "universal solvent," a potent liquid capable of dissolving everything: just what this liquid, when discovered, was to be kept in they do not seem to have worried about! Many of the alchemists were perfectly sincere in their work, but many others were dishonest—mere charlatans—who pretended to have discovered the secret of transmutation, and sold their worth-