

We have abundant evidence that these people possessed a considerable knowledge of metals and their alloys, of the art of glass blowing and of pottery, they prepared fermented wines and beer, and were the first to employ chemical preparations for medicinal purposes. Their knowledge was purely empirical and in most cases accidentally acquired. No serious thought had been given to the composition of chemical substances, or to the nature and cause of chemical phenomena. They confined their study to the preparation and use of chemicals as a means of satisfying daily wants or adding to the comforts of everyday life. As a result of social and commercial intercourse the knowledge of chemistry gradually spread eastward among the Phœnicians and the Jews, thence westward to the Greeks and the Romans. To the Greeks we are indebted for the earliest theories regarding the ultimate constituents of the material world. They were perhaps no more inclined than were their predecessors to engage in the labor of chemical experiment and investigation, but the old Greek philosophers dearly loved to speculate.

Empedocles described four elements, Earth, Air, Fire and Water as the basis of the material world. Aristotle disputed this theory. He assumed one original matter possessed of the chief properties of the four elements, viz. : moist, dry, cold, warm, each element combined two of these properties, earth, dry and cold ; water, cold and moist ; air, moist and warm ; fire warm and dry. The difference in material things he ascribed to a difference in the properties inherent in matter, in other words one substance may be transformed into another ; example—by a simple process water is changed into air. As a natural sequence of this doctrine it was inferred that the baser metals might be turned into gold, and organs wasted by disease and age be restored to the vigor of health and youth. Thus was laid the foundation of the weird and mystic science of Alchemy, a science which dominated the study of chemistry from the beginning of the Christian era to the end of the 16th century. In every age men have been eager, to find some royal road to wealth and to avert disease and death, hence we are not surprised that all classes from the monk in his cloistered cell to the prince in the