

## AN ARAB ALCHEMY

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4th century Byzantium was a hotbed of alchemical ideas in Europe. Having conquered Egypt in the 7th century, the victorious march of a new world religion - Islam - began, which led to the creation of a huge Caliphate, universities were created, which gave humanity a whole galaxy of outstanding scientists. Imitating the ancient rulers, the caliphs began to patronize the sciences, and in the 7th–9th centuries. the first chemists appeared.

Talented and famous Arab alchemists were Jabir ibn Hayyan, Abu Bakr Muhammad ibn Zakariya Ar-Razi, Ayyub al-Ruhavi, Abu Ali al-Hussein ibn Abdallah ibn Sina, Abu ar-Rayhan Muhammad ibn Ahmed Al-Biruni (973-1050) and Abd al-Rahman Khazini and many others. The first sources of chemical knowledge of the Arabs, without a doubt, were Syrian, Persian and Indian philosophical and chemical manuscripts, partly representing translations of extracts from Greek and Alexandrian authors. Later, in the 8th and 9th centuries, the Arabs became acquainted with the original Greek works, mainly the works of the authors of the Alexandrian Academy, and translated them into Arabic. By the beginning of the 9th century. Chemical works also appeared, written independently by Arab scientists.

The first Arab alchemist is called Kalida ibn Azid, a prince of the Umayyad dynasty (about 660-704). There is a legend that Kalid was a widely educated man and was especially fond of alchemy. He gathered scientists and philosophers who lived in Egypt, and together with them he carried out operations of transmutation of metals and the preparation of artificial gold. At the direction of Kalid, the first alchemical works were translated from Greek and Latin into Arabic. Subsequently, Kalid's leader in the field of alchemical studies was the monk Marian, a student of

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the Alexandrian philosopher Stephanos. According to legend, Kalid himself wrote several works of alchemical content.

Jabir ibn Hayyan (late 8th century), later known in Europe as Geber, who believed that sulfur and mercury are two opposite principles from which the seven other metals are formed; Gold is the most difficult to form: for this you need a special substance, which the Greeks called xerion - "dry", and the Arabs changed to al-iksir (this is how the word "elixir" appeared). The elixir was supposed to have other wonderful properties: to cure all diseases and give immortality.

The Arab alchemist, al-Razi (c. 865–925) (known in Europe as Rhazes) also practiced medicine. Thus, he described the method of preparing plaster and the method of applying a bandage to the fracture site.

However, the most famous doctor was the Bukharian Ibn Sina, also known as Avicenna. His writings served as a guide for doctors for many centuries."

The last major Arab alchemist was Al Jildaki (first half of the 14th century), who wrote a number of works that very fully summarize the works of his predecessors. The center of scientific thought began to move to Europe.

In general, Arab alchemists were characterized by a careful attitude to the description of the experiment; scales and laboratory technology had already reached a high degree of perfection by the 11th century. In particular, Abu ar-Rayhan Muhammad ibn Ahmed Al-Biruni (973-1050) and Abd ar-Rahman Khazini cited in their works values of metal densities that differed from modern values by less than one percent.

"Marie-Louise von Franz describes in the introduction to Ibn Umail's Book of Explanation of Symbols - Kitab Hall ar-Rumuz the contribution of Islamic alchemy as follows: In the 7th-8th centuries, Islamic scholars were mainly interested in translating ancient Hermetic-Gnostic texts without changing them. Gradually they began to "match" their content with the Islamic religion" and began to "think independently and experiment in the field of alchemy." Thus, they added "an emphasis on a monotheistic worldview" (tawhid) and increasingly created a synopsis of the diverse ancient traditions.

By combining Thus their meanings, Islamic scholars came to the idea: one inner psychic experience, namely the "image of God", and that stone, water, prima materia, etc. were "all aspects of the inner mystery by which the alchemist unites himself with the transcendental God Secondly, they added a "sensual tone of passion" using much more poetic language than the ancient Hermeticists, and also paying "greater attention to the motif of the coniunctio", that is, the imagery of the union of man and woman, the sun and the moon, the king and queen and etc. "The mystical masters of Islam understood alchemy as a transformative process of the

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alchemist's psyche. The fire that contributed to this transformation was the love of God.”

### **Bibliography**

1. Фигуровский Н.А. Очерк общей истории химии. М., 1969
2. M. V e r t h e l o t. La Chimie au moyen age, t. I—III. Paris, 1893.
3. Грушевицкая Садохин КСЕ Учебник