



# MINERALOGY



MINERALOGY (the mineral and Greek. λόγος - logos, word, doctrine / eng. Mineralogy; the science of minerals. Studies the composition, properties, morphology, features of the structure, processes of formation and alteration of minerals, patterns of their joint finding in nature, as well as the conditions and methods of artificial production (synthesis) and practical use



Mineralogy, a longtime science (according to some, she's about 2000 years), although the term "Mineralogy" appeared relatively recently – 1636 and entered the Italian natural philosophers Bernard Cesium. On the practical value of this science to a certain extent shows the origin of the term "mineral" is from the ancient word "miner", which means ore or stone from which to extract the metal. It is assumed that the use of the term "mineral reaches ancient times (around 300 BC) and caused by mining and smelting activities of the Celtic tribes.





Under the mineral means a product of natural physical and chemical processes in the earth's crust, or in space, detached from the environment, and has a certain chemical composition and crystal lattice. The subject of Mineralogy are not only products of natural processes — the minerals, and the processes that arise or are undergoing various changes, these products. Hence, Mineralogy is a science that is emerging of the history of minerals. It reviews and examines the mineral in its development and belongs to the geological Sciences, which from different sides of studying the inorganic body of the Earth.



## Division of Mineralogy:

1. Mineralogy of the earth's crust:
2. Mineralogy of the mantle;
3. the Mineralogy of the space; depending on the approaches to

## Mineralogy minerals are:

- 1) physics of minerals
- 2) the chemistry of minerals
- 3) structural Mineralogy
- 4) mineralogical crystal chemistry
- 5) genetic Mineralogy
- 6) experimental Mineralogy
- 7) applied Mineralogy
- 8) regional Mineralogy
- 9) systematic Mineralogy.

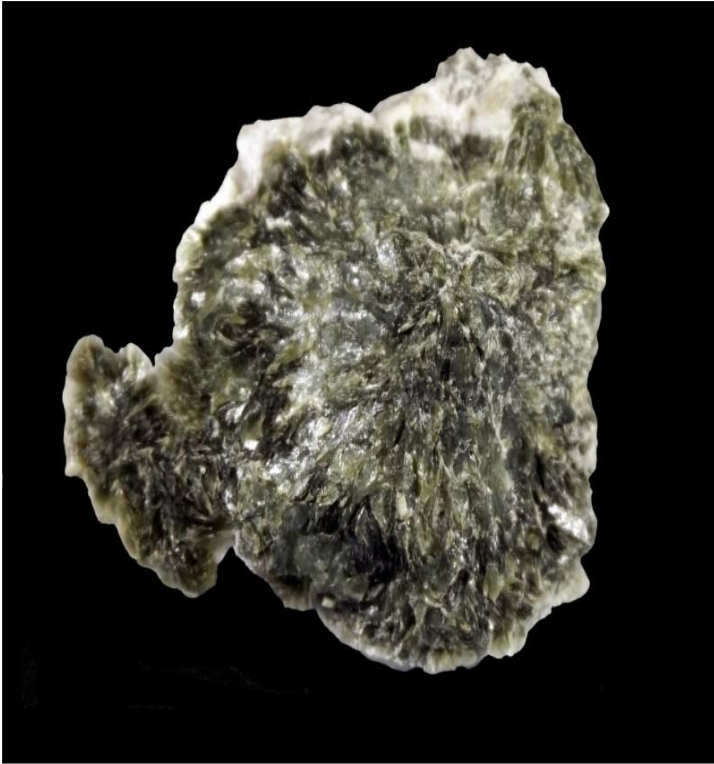




Chemical composition and properties of minerals In the mineral composition includes almost all the chemical elements of the periodic table, however, their participation in the composition of the minerals varies. Along with the main elements that determine the independence of mineral species, there are elements included in the mineral only as impurities. So, for example, silicon (Si) constitutes more than 400 minerals, impurities can be CA, Mg, Fe, Mn, Al, CR. Not currently known minerals formed by rubidium(Rb)and hafnium (Gf).



Minerals are considered as some natural substances which are in normal conditions fluid. For example, native mercury, which comes to a crystalline state at a lower temperature). Water to the minerals do not belong, considering it as a liquid mineral ice. Certain organic substances — oil, asphalts, bitumen — often mistakenly attributed to the minerals, or allocate them in a special class of organic minerals.





Minerals in nature. The crust of Two elements, oxygen and silicon. The most common minerals are the silicates, a chemical compound of oxygen and silicon. Is dominated by silicates, like quartz, mica and feldspars. All three in different proportions are the basic components of different types of granite. Quartz eroded from granite, accumulates on the coast, and forms sandy beaches. quartz mica calcium Chloride iron potassium

