

ELEMENTARY CAUSES OF THE FORMATION PROCESSES OF MAGMATIC ROCKS

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Abstract. The science of studying rocks is called petrography and it is a branch of geology. As rocks. It refers to the natural geological parts that make up a large part of the earth's crust, consist of one or more minerals, and have a constant composition. If the rocks are composed of one mineral (gypsum, anhydride, quartz), they are called monomineralic, if they are composed of several minerals (granite, syenite, diabase, etc.), they are called polymineralic rocks. Igneous or igneous rocks.

Key words: rocks, magmatic, metamorphic, igneous rocks.

ЭЛЕМЕНТАРНЫЕ ПРИЧИНЫ ПРОЦЕССОВ ОБРАЗОВАНИЯ МАГМАТИЧЕСКИХ ПОРОД

Аннотация. Наука, изучающая горные породы, называется петрографией и является разделом геологии. Как горные породы. Она относится к естественным геологическим частям, которые составляют большую часть земной коры, состоят из одного или нескольких минералов и имеют постоянный состав. Если породы состоят из одного минерала (гипс, ангидрид, кварц), они называются мономинеральными, если они состоят из нескольких минералов (гранит, сиенит, диабаз и т. д.), они называются полиминеральными породами. Магматические или изверженные породы.

Ключевые слова: породы, магматические, метаморфические, изверженные породы.

The chemical composition of igneous rocks is very complex, mainly (silica) and known chemical elements are found. Very common igneous rocks contain the following compounds: Al_2O_3 , Fe_2O_3 , FeO , MgO , CaO , Na_2O , O , H_2O , their amount is 98%. Quartz in magmatic rocks is divided into the following 4 groups depending on the amount of SiO_2 :

1. Sour rocks-SiO₂ content is 65-75%.
2. Medium rocks – SiO₂ content is 52-65%.
3. Basic rocks – SiO₂ content is 40-52%.
4. Ultra basic rocks – SiO₂ content is less than 40%.

It can be seen that, depending on the amount of silica in these four groups of rocks, their mineralogical composition differs sharply. Sour igneous rocks have more quartz and feldspar (orthoclase), so their color is pale. As the amount of silica in medium rocks is low, they contain almost no or very little quartz. The main rocks consist of black iron-magnetic silicate minerals - olivine, horn cheater, augite, feldspars, and plakioglasses it can. Therefore, such igneous rocks are usually black in color. The color, structure and texture of igneous rocks are their most important features. Igneous rocks are formed in 3 different ways: 1) intrusive, 2) effusive, 3) intestinal.

Intrusive igneous rocks are formed inside the Earth, they are affected by high pressure and high temperature, and reach complete crystallization. Such structures appear as a result of gradual cooling of magma, and all minerals crystallize evenly. Therefore, these rocks (granite) consist of well-formed minerals. Rocks are divided into the following structures depending on the size of their particles: 1. Fine-grained (less than 1 mm). 2. Medium-grained (up to 1-5 mm). 3. Large-grained (up to 5-10 mm). 4. Very large grain (sometimes more than 10 mm). Effusive igneous rocks are formed as a result of the eruption of lava on the Earth, the water and gases contained in the lava are ignited, and the atmosphere affects them, resulting in the formation of porous and glassy rocks. In the process of rapid cooling of magma, substances do not have time to crystallize and a glassy structure is formed. This structure is found in volcanic glass-rock, and in the structure of some igneous rocks.

They appear from the simultaneous crystallization of two compounds (for example, from the simultaneous crystallization of quartz and feldspar). Intrinsic rocks are formed as a result of solidification of magma or lava in cracks in the rocks. Depending on the texture, igneous rocks are composed of dense or closed mineral aggregates. Porous rocks contain small pores and holes that can be seen with the naked eye. General understanding of igneous rocks Igneous rocks are formed by the eruption of magma from the deep parts of the earth's crust to the surface of the earth or by the gradual cooling between the rocks at different depths.

Igneous rocks are divided into intrusive and effusive depending on where the magma has cooled. Intrusive (deep) rocks are formed when magma rises from the interior of the earth under high pressure and temperature, penetrates between the rocks, and gradually cools. Under these conditions, the minerals separated from the magma reach complete crystallization and form granular rocks.

Sedimentary rocks are divided into 4 groups depending on the conditions of formation.

1. Mechanical sedimentary rocks
2. Chemical sedimentary rocks
3. Organic sedimentary rocks
4. Mixed sedimentary rocks

Mechanical sedimentary rocks Mechanical sedimentary rocks are formed as a result of weathering of magmatic and metamorphic rocks, which are accumulated in their place or moved to other places under the influence of water, glaciers and wind. Mechanic Sedimentary rocks formed by the road are divided into 3 main groups depending on the size and cementation of the particles: 1. Silty rocks 2. Clay rocks 3. Cemented or petrified sedimentary rocks

1. Aggregate rocks - kharsangtash, big stone, gravel sheben, gravel and sand. The construction properties of these rocks mainly depend on their density, the uniformity of particles and fragments.

2. Clay rocks - consist of dust and clay particles. These include loess, supes, silts and clays.

3. In nature, soft rocks are not only layered, thickened, but also cemented under the influence of lime, magnesium, iron, silicon and clay substances dissolved by waters moving underground. In this case, substances penetrate between soft rocks and cement the rock particles together as a result of sedimentation. As a result, conglomerate (gravel stone), breccia (edged stone), sandstone, siltstone, argellite and other rocks are formed. **Chemical Sedimentary Rocks** Chemical sedimentary rocks are formed by the precipitation of chemical substances in solution.

Such a process is observed in sea and ocean waters, in water basins that are drying up, in saline springs. Chemical rocks include limestone, dolomite, anhydrite, gypsum, table salt. As a result of the dissolution of such rocks in water, pores, cavities and cracks are formed. **Organic sedimentary rocks** Organogenic rocks are formed from the accumulation of the remains of animals, plants and dead organisms at the bottom of the seas and oceans. Organogenic rocks are porous, dissolve in water, and are compressed under the influence of external forces. The rocks in this group include siliceous rocks - diatomite trepel, opoka, peat, coal, lignite, anthracite, combustible shale, peat, oil, asphalt, etc. Sedimentary rocks are also formed from a mixture of two or more different rocks. Often, rocks are formed from a mixture of organic materials and chemical and organic products. They mainly fly in lakes and seas with little water.

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