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CARBONACEOUS CONNECTIONS AND OXIDE OF SILICON IN NANOWORLD

Abstract. The compounds of CmHnand SimOn types are the steady and widespread massive material innormal conditions. In terms of carbon particles selected in Kazakhstan deposits, it was established, that all types of particles identified by the classification of nanoforms during synthesis exist in natural conditions in the deposits.. In many cases the formation of nanosizeparticles associated with "capture" of inclusions. Assumptions about dimensions of inclusions were made.

Example of reconnaissance – surveyed systematization of twenty – five objects for the identification of promising deposits are given. The areas, perspective for extraction of formed forms are not those for the formed graphites. The probable model of carbon behavior in the nature was described.

Carbonaceous matter (oxide of silicon) and its composites are capable to become a natural raw material.

Key words: nanosize, carbonaceous particles, inclusions, deposits.

Introduction. The world has already enteredinto thenanoera and it is difficult to find the sphere of human activity wherever nanosized particles are not used. Now it is time when unusual properties of nanomaterials were already discovered. The world has passed to a directed study of the properties of specific materials involving nanoscale formations. Moreover, many composite materials will be obtained in several stages. Hard core of nanowaves are obtained by physical chemistry methods, but because of small quantities of the product it does not satisfy the demand of the industry. We are faced with the task of finding the sources of nanosubstances in nature. It will be a new raw material. Based on knowledge of nanoparticles, data on synthesis processes and geological conditions of genesis [1, 2], we can predict the occurrence of these particles in known (analytically studied) deposits. For the initial studies, the most common carbon and siliceous components of rocks and ore materials are selected. Carbon shales are considered promising in research for carbon. A reconnaissance survey for the content of natural substance nanoforms are carried out for more than 25 developing processes. Fields of primary research have been identified, nanoforms isolated by chemists have been found.

Combinations of CmHn and SimOn. Carbon combinations and silica (oxideofsilicon) are one of the most common minerals on Earth. Therefore, we began to study nanoscale rocks from them. Carbon and silicon are elements of group 4, 2 and 3 periods of the periodic table. They can both give and receive electrodes, attaching other elements. The combinations formed in most cases of the type CmHn and SimOn (for example, CH_4 and SiO_2) were considered. When formed from the galactic cloud of hydrogen – they are formed among the first and are sufficiently stable in terrestrial conditions. Moreover, if compounds of CmHn type can be found in gaseous (gas), solid (carbon, shales) and in the liquid state (oil), then compounds of the SimOn type are found mainly in the form of solid compounds (quartz). Carbon and its compounds have different forms (CH_4, C_2H_2 ..., CO ....). But they all turn into carbon (C) at low temperatures. SimOn compounds are stable under the same and higher temperature conditions and do not convert to silicon (Si).

The substance formed in natural conditions has a mass of inclusions, which complicates its diagnosis. At the same time, the same substance synthesized from a finite number of certain atoms, under given