

Mining Institute

<http://www.ksc.ru/instituty/gornyy-institut/>

<http://www.goikolasc.ru/>



The Institute carries out fundamental and applied researches aimed at acquisition of new knowledge in the field of mining science – development and expansion of mineral raw materials base with an integrated approach applied to mining, ore and man-made raw materials processing, equipment modernization and solution of environmental problems.

The Institute is the only academic mining institute in the North-West Russia that plays the leading role in rendering the scientific support to the main mining operators in their development in the Russian area of the Barents region.

The Institute was established in 1960. Since that time it has been headed by N.A.Voronkov, Ph.D., I.A.Turchaninov, a corr.-member of the USSR AS, N.N. Melnikov, Academician of RAS. Since 2015, the Institute is headed by the acting Director S.V.Lukichev, Dr.Sc.

The Institute is the leader in a number of priority fundamental and applied fields of research, such as:

- ore deposits mining under complicated mining-and-geological conditions;
- modern information and computer technologies development in mining;
- rock mechanics for mining operations safety ensuring;
- integrated processing of mineral raw materials;
- underground construction technologies for special facilities of the governmental appropriation;
- use of subsurface space for long-term radioactive waste disposal and underground nuclear low-power plants construction;
- preservation and development of man-made deposits;
- monitoring of man-made impact to the environment using the satellite observation data;
- restoration of natural ecosystems.

Fundamental and applied research carried out within these fields recently resulted in that significant innovative developments have been introduced at many mining enterprises of the Murmansk region, as well as in the Ural, Siberia and the Far East regions. The results of the Institute's activity are much-needed: this can be confirmed by around 50 - 60 contracts implemented annually with industrial enterprises located in the North-West Arctic and other regions of Russia.

There are 9 laboratories at the Institute:

- development and rational use of subsurface space;
- geocotechnologies;
- theory of integrated development and preservation of mineral deposits;
- technological processes in useful minerals mining;
- geomechanics;
- geofluidomechanics;
- flotation reagents and complex ores processing;
- mineral raw materials preprocessing and ore preparation;
- new technological processes and apparatus; as well as
- the Engineers centre.

Fundamental and applied research is carried out due to the developed experimental base.

The Institute has unique geodynamic and explosion testing grounds, modern equipment for researches of physical-and-mechanical rock properties, pilot mini-processing plant to carry out pilot runs of processing technologies for apatite-nepheline, copper-nickel, kyanite, chrome titan-bearing, rare-metal and other ores from both the deposits of Murmansk region and other regions of Russia.