

- Development of a detailed stratigraphic basis for geological survey and geological prospecting activities in Siberia
- Development of model and reference sections of the Late Precambrian and Phanerozoic oil&gas and ore regions in Siberia.
- Elaboration of the paleontological substantiation of the deposits geological age including one for such specific groups of extinct organisms as sponges, gastropods, monoplacophora, hyolithids, angustisecreids, hyolithelminths, tommothides, conodonts, chancellorides, cambrosclerotides, etc. in the deposits of the late Precambrian and Cambrian periods, the seeds of the Upper Paleozoic formations.
- Identification of Cambrian and Devonian Reef system in the Paleozoic layer of the West Siberian Paleozoic megastructure, in the Cambrian structures of the Siberian Platform and folded mountain areas of Southern Siberia.
- Development of paleobiogeographical, palaeogeographical, and paleoclimatic paleolandscape models for the Siberian Platform, West-Siberian plate, Altai-Sayay, Taimyr areas and Eurasia in general.
- Elaboration of a number of theoretical issues in stratigraphy including the understanding of the processes in the organic world evolution, specific features of the planetary, regional and local stratigraphic scales; correlation between biostratigraphic studies and sedimentation-paleogeographic backstripping in the development of the stratigraphic scales.
- Suggestion of a new understanding of some provisions in the area of classification and boundaries between the stratigraphic units; ecological stratification; formations; understanding of the organic world evolution processes; specific features of planetary, regional and local stratigraphic scales; correlation between the biostratigraphic studies and sedimentation-paleogeographic backstripping in development of the stratigraphic scales.
- Development of the first stratigraphic model of the Paleozoic formations in the West Siberian Plain.
- Performance of a monographic study of the fossiliferous and publication of a series of monographs and articles on stratigraphy and monographic description of Cambrian archaeocyathans and trilobites; conodonts of the Upper Cambrian, Ordovician, Silurian and Devonian periods; tabulates, tetracorals, brachiopods of Ordovician, Silurian and Devonian periods; seeds of the Upper Paleozoic period; stromatoporates, tentaculites, algae and vegetation of the Devonian Upper Palaeozoic periods, Upper Paleozoic seeds, microflora issues of the Riphean, Vendian, Cambrian Devonian periods; foraminifera, ammonoid, bivalves, plants of the Upper Paleozoic and Mesozoic periods in Siberia.
- Participation in drafting of an international directory "Treatise on Invertebrate Paleontology. Part O. Arthropoda" (1997).
- Participation in development and publication of the 9-volumes edition of "Stratigraphy of oil and gas basins in Siberia" (2000-2016) that has become the latest and most complete summary of deposits from the Riphean to Cenozoic eras inclusive.
- Arrangement of the international field conferences and symposium on Cambrian formations of the Siberian platform (1973, 1990, 2008.) and elaboration of the subject-matter guides to the events. Development and submission to the International subcommittee on Cambrian stratigraphy of suggestions on stratified compartmentalization of the Cambrian deposits of the International Cambrian Stratigraphic Scale.
- Determination of the values of the geodynamic processes for development of local stratigraphic subdivisions (V.I. Krasnov, A.P. Scheglov), suggestion of new statements for such concepts as suite, formation, a number of stratigraphy principles (L.L. Halfin, V.E. Savitskiyy, I.G. Zalzman, V.I. Krasnov).
- Analysis of specific features and conditions for development of wedge-like formations in the West Siberian oil and gas province, its oil and gas potential, stratification, position in the hierarchy of the local stratigraphic structures, as well as the Cambrian carbonate wedge-like formations in the Siberian Platform. (review of a number of consequences for

development of the stratigraphic framework, geological mapping, tectonic backstripping, and forecast oil and gas survey explorations arising from the wedge-like formation of the deposits structures, including the reef formations).

- Elaboration of typical model paleobasin structure with terrigenous and carbonate accumulation that reflect the history of development and filling of the sedimentation area; analysis of the methodical approaches to comprehensive study of the stratified structure of the sedimentary basins with different type of the sedimentation genesis (I.V. Budnikov, V.P. Devyatov, S.S. Sukhov);
- Development of the Atlas of paleogeographic maps on the basis of historical and genetic analysis of the sediments and sedimentation processes modeling for the most important and significant levels of Phanerozoic sedimentation in Siberia reflecting the basic dependencies in the development dynamics of the paleobasins in the past.
- Development of the methodological foundation for lithologic and stratigraphic stratification of the productive strata in oil and gas provinces of Russia.
- Development of the model lithographic-facial and biostratigraphic patterns of the main oil and gas basins and adjacent waters.
- Performance of Substantiation of the stratigraphic scales of the Meso-Cenozoic deposits in promising areas of the continental shelf of the Russian Federation on the basis of the analysis and systematization of data for reference sections on land and sea.
- Development of the refined stratigraphic models of the Upper Proterozoic deposits in the Siberian Platform (Baikit antecline, Katanga saddle) based on the deep drilling materials and supporting sections with application of biostratigraphic and paleomagnetic methods.
- From 2013 to 2016, sixteen regional stratigraphic models of new generation were reviewed and approved by the MSK Bureau. In 2017 SNIIGGiMS began publishing of these models in the special issues of the magazine "Geology and mineral resources of Siberia."