

## **GEOSYNERGETIC THEORY OF PETROLEUM HYDROCARBONS ORIGIN AND SUSTAINABLE DEVELOPMENT OF OIL-GAS PRODUCTION.**

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At the millennium boundary we oblige to ascertain that the problem of petroleum hydrocarbons origin remains unsettled (its main fundamental and applied aspects are considered). The idea of “ready-made” oil jet migration from the mantle is at variance with a number of principal petroleum geological and geochemical facts. Manifestations of mantle high-enthalpy hydrocarbons-bearing fluids were detected and investigated. They are represented by extremely peculiar injected isolations of black pelitomorph polymineral matter connected with natural hydraulic fracturing. In spite of paragenetic relations with petroliferous secondary reservoirs they have nothing to do with common hydrocarbons pools and are defined as “frozen mixtures” with a number of remarkable geochemical and mineralogical features. Sedimentary-migration theory (with its concepts of “oil formation main phase” or “oil window” faced insurmountable geothermodynamic geothermobaric obstacles (diagenesis-catagenesis is not able to provide spontaneous avalanche-like hydrocarbons generating owing to geologically-prolonged proceeding of organic and mineral matters transformation processes). Genesis of petroleum hydrocarbons derive from different multiplied systems which are due to the superposition of hypo-allogenic factors upon diverse types of upper crust substrata (black shales and other hydrocarbon pelites; black oozes, peats and coals; crystalline rocks with abundant hydrocarbons-bearing gas-liquid inclusions; salt rocks with dispersed gases; deep-buried gasiferous depressional deposits; chemosynthetic microflora within rifts and calderas). The special role of deep-earth heat-mass transferring flows for oil-gas-accumulating is sustained by isotope data, among them by essential difference of  $\delta D$  of oils (condensates) from rift and subductional petroliferous basins. The phenomena of petroleum hydrocarbons replenishment are established. It allows to consider the geosynergetic theory of petroleum hydrocarbons origin as the base of oil-gas production's sustainable development.