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THE APPLIED DEVELOPMENTS DIRECTION “COGNITIVE MODELING IN THE NATURAL SCIENCES” (“NEN”) OF “SRI "SFA CMT" OF "RA(N)S" N. A. VENIAMINOV V.N.” (PART 4)

The developed “The applied developments direction "Cognitive modeling in the natural sciences"” (“NEN”) treats to the applied developments divisions of “The scientific-research institute "System and financial analysis based on cognitive modeling technology" of "RA(N)S" named after Veniaminov V.N.” (“SRI "SFA CMT" of "RA(N)S" n. a. Veniaminov V.N.” – SRI) as the first SRI in the structure of “SIO "Academy of cognitive natural sciences"” (“SIO "ACNS"”) and the add. component of the system of science and education of the modern country for the creation, distribution and use of the main and derivative scientific results of the cognitive modeling technology (CMT) (www.vetrovan.(spb.)ru) [see the applied developments directions and scientific-researches laboratories of SRI]: 1) it is executed by the principle of “administrative-economy submission”; 2) works in the several main directions, which allow to provide the development of the applied main and derivative scientific results (my second report on SRW from 2006-2008(9) y. was submitted to “SPbSETU "LETI"” and “The Government of RF” for the translation, carrying out of int. action and receiving of “The Nobel prize”); 3) includes the several various main divisions: VII. “The scientific-researches laboratory "Applications of theoretical and experimental physics, geo-physics, power-engineering, electrical-engineering, electronics and radio-engineering, nuclear physics, technics and instrument making"” (“SF”) (*) [***the applied developments in the area “Applications of physics” (*)*** – usage of theory of the general problems of physical experiment, usage of theory of physics of elementary particles, usage of theory of fields (united theory of field), usage of theory of physics of high energies, usage of theory of nuclear physics, usage of theory of physics of gases and liquids, usage of theory of thermal-dynamics and statistical physics, usage of theory of physics of firm bodies, usage of theory of physics of plasma, usage of theory of physics of atom and molecule, usage of theory of optics, usage of theory of laser physics, usage of theory of radio-physics, usage of theory of the physical bases of electronics, usage of theory of acoustics, usage of theory of the cognitive modeling technology in the applications of physics, usage of theory of the cognitive models of the interaction between the elementary particles and firm bodies, fields, liquids and gases, usage of theory of the cognitive model of the modified volumetric planetary model of atom n. a. Bohr N.H.D., usage of theory of the cognitive models of the temperature areas of plasma of atom and molecule, usage of theory of the cognitive model of the optical environment of eye, usage of theory of the cognitive model of the acoustical environment of ear, usage of theory of the cognitive model of the waves distribution in the environment; ***the applied developments in the area “Applications of geo-physics”*** – usage of theory of geo-magnetism in the high layers of atmosphere, usage of theory of meteorology, usage of theory of climatology, usage of theory of oceanography, usage of theory of hydrology of land, usage of theory of glaciology, usage of theory of physics of The Earth, usage of theory of the cognitive modeling technology in the applications of geo-physics;

“The Nobel committee” (The Kingdom of Norway and The Kingdom of Sweden)
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the applied developments in the area "Applications of power-engineering" – usage of theory of power-resources, usage of theory of power balance, usage of theory of electrical-power-engineering, usage of theory of heating-power-engineering, usage of theory heating-technics, usage of theory of atomic power-engineering, usage of theory of hydro-power-engineering, usage of theory of gelio-power-engineering, usage of theory of wind-power-engineering, usage of theory of direct transformation of energy, usage of theory of the cognitive modeling technology in the applications of power-engineering;
the applied developments in the area "Applications of electrical-engineering" – usage of theory of electrical-engineering, usage of theory of electrical-technical materials, usage of theory of electrical machines, usage of theory of electrical devices, usage of theory of transformers, usage of theory of electrical reactors, usage of theory of power electrical condensers, usage of theory of power converting technics, usage of theory of electrical-drive, usage of theory of electrical-thermics, usage of theory of electrical-welding equipment, usage of theory of wire and cable, usage of theory of electrical isolators, usage of theory of light-engineering, usage of theory of electrical-technical equipment of special purpose, usage of theory of the cognitive modeling technology in the applications of electrical-engineering;
the applied developments in the area "Applications of electronics and radio-engineering" – usage of theory of the theoretical bases of electronic technics, usage of theory of radio-engineering, usage of theory of materials for electronics and radio-engineering, usage of theory of technology and equipment for the electronic and radio-technical manufacture, usage of theory of designing and constructing of electronic devices and radio-electronic equipment, usage of theory of electrical-vacuum and gas-discharge devices and units, usage of theory of accelerators of charged particles and plasma, usage of theory of solid-state devices, usage of theory of quantum electronics, usage of theory of holography, usage of theory of crio-electronics, usage of theory of radio-electronic circuits, usage of theory of distribution of radio-waves, usage of theory of antennas, usage of theory of wave-transports, usage of theory of elements of micro-wave technics, usage of theory of radio-transmission and radio-receiving devices, usage of theory of the radio-technical systems of sounding, location and navigation, usage of theory of television technics, usage of theory of record and reproduction of signals, usage of theory of electrical-acoustics (theory of waves distribution in the environment), usage of theory of ultra-sonic and infra-sonic technics, usage of theory of infra-red technics, usage of theory of units, details and elements of radio-electronic equipment, usage of theory of devices for the radio-technical measurements, usage of theory of the systems and units of information display, usage of theory of the cognitive modeling technology in the applications of electronics and radio-engineering;
the applied developments in the area "Applications of nuclear technics and instrument-making" (*) – usage of theory of nuclear raw materials and fuel, usage of theory of synthesis of isotopes, usage of theory of isotopes and ionization radiations, usage of theory of nuclear reactors, usage of theory of thermal-nuclear reactors, usage of theory of action of radiations and protection against them, usage of theory of nuclear explosions, usage of theory of processing of nuclear fuel and waste disposal, usage of theory of the cognitive modeling technology in the applications of nuclear technics and instrument-making, usage of theory of the cognitive models of the structure of the chemical elements with 1, 2, 3, 4, 5 and more nucleuses, usage of theory of the cognitive model of the modified of volumetric principle n. a. Pauli W.E. for the studying of electronic clouds within limits of power levels, usage of theory of the cognitive model of the modified planetary model of atom n. a. Bohr N.H.D. and others].

VIII. “The scientific-researches laboratory "Applications of (non)organic chemistry, crystallography, mineralogy and chemical industry"” (“SH”) (*) [***the applied developments in the area “Applications of chemistry” (*)*** – usage of theory of basic-laboratory chemical equipment and units, usage of theory of physical chemistry, usage of theory of nonorganic chemistry, usage of theory of complex compounds, usage of theory of analytical chemistry, usage of theory of organic chemistry, usage of theory of bio-organic chemistry, usage of theory of natural organic compounds and their synthetic analogues, usage of theory of chemistry of high-molecular compounds, usage of theory of biological chemistry, usage of theory of the cognitive modeling technology in the applications of chemistry, usage of theory of modeling of the structure of the (non)organic chemical elements and the chemical elements with 1, 2, 3, 4, 5 and more nucleuses, usage of theory of research of the molecular structure of (non)organic compounds; ***the applied developments in the area “Applications of chemical technology and chemical industry”*** – usage of theory of processes and devices of chemical technology, usage of theory of chemical raw materials, usage of theory of technology of production of nonorganic substances and products, usage of theory of production of fertilizers, usage of theory of technology of production of silicate and refractory nonmetallic materials, usage of theory of industrial organic synthesis, usage of theory of industrial synthesis of organic dyes and pigments, usage of theory of technology of production of photographical materials, usage of theory of technology of production of explosive substances and means of chemical protection, usage of theory storage and destruction of chemical weapon, usage of theory of technology of production of the chemical-pharmaceutical means, usage of theory of technology of production of fragrant substances, usage of theory of technology of production of pesticides and disinfectant substances, usage of theory of processing of natural gases, oil, gas condensate, their products and analogues, motor fuel and lubricant materials, usage of theory of technology of processing of firm combustible minerals, usage of theory of forestry-chemical manufactures, usage of theory of technology of production of natural high-molecular compounds, usage of theory of technology of production of synthetic high-molecular compounds, usage of theory of technology of production of plastics, usage of theory of technology of production of rubbers and products from them, usage of theory of technology of production of paint-varnish materials and organic coverings, usage of theory of technology of production of chemical fibers and strings, usage of theory of technology of production of chemical reactants and especially clean substances, usage of theory of technology of production of household chemical products, usage of theory of technology of production of auxiliary materials, usage of theory of the cognitive modeling technology in the applications of chemical technology and chemical industry].

The applied developments directions and scientific-researches laboratories of SRI allow to develop the main and derivative scientific results of CMT.