
Summaries

UDC 512.541

Krylov P.A., Podberesina E.I.

ABELIAN GROUPS AS ARTINIAN OR NOETHERIAN MODULES ABOVE ENDOMORPHISM RINGS. P. 3

The A and B Abelian groups, such that the $\text{Hom}(A, B)$ homomorphism group is the Artin module over the ring of the B group endomorphism, are described. Description of the A and B group for which the $\text{Hom}(A, B)$ group is the Artin module over the ring of the A group endomorphism is reduced to the case when the A group has no torsion and the B group is either a quasi-cyclic group or a divisible group without torsion. The A and B Abelian groups for which the $\text{Hom}(A, B)$ group is the Neter module over the $E(A)$ or $E(B)$ ring are characterized. The research of arbitrary Abelian group with the link Neter ring of endomorphisms is reduced to the research of the group without torsion with the link Neter ring of endomorphisms. The research of the right Neter ring of endomorphisms remained uncompleted. The separable Abelian groups without torsion with the link and right Neter rings of endomorphisms are described.

UDC 514.76

Luchin A.A.

ON PAIR OF m -SURFACES WITH THE SET NETWORK IN MULTIDIMENSIONAL PROJECTIVE SPACE

The two m -dimensional surfaces in n -dimensional projective space between which points point conformity is established are studied. The network of lines is set on surfaces. Some geometrical images connected with the network are considered. Consideration everywhere has local character. All functions considered in the given work are assumed analytical.

UDC 537.874.4

Keller Yu.A.

RESEARCH OF ELECTROMAGNETIC DISPERSION BY THE STRUCTURES MADE BY SEVERAL NOT CROSSED CONDUCTORS

The numerical algorithm for solution of the problem of electromagnetic dispersion on the structures made by final number of not crossed thin conductors is constructed on the basis of the auxiliary sources method. The constructed algorithm is realized as the computer program for calculation of dispersion characteristics of some structures distinguished by relative location of conductors. Influence of relative location of conductors on bistatistical dispersion sections of the considered structures, and also on current distributions along conductors is studied.

UDC 535.36

Goryachev B.V., Mogilnitsky S.B.

INFLUENCE OF SPATIAL LIMITEDNESS OF A DISPERSE MEDIA ON QUALITY CHARACTERISTICS OF AN IMAGE

Influence of spatial limitedness of a disperse media on radiation distribution and quality characteristic of an image obtained through disperse media of final sizes is investigated. The way of calculation of edge function and contrast function of a light strip is determined. It is shown, that spatial limitedness of the disperse media and illumination condition render significant influence on quality characteristics of an image.

UDC 553.411.071.242.4+550.4

Kucherenko I.V.

MINERALOGICAL-PETROCHEMICAL AND GEOCHEMICAL FEATURES NEAR ORE METASOMATISM IN THE GOLD ORE

DEPOSIT "VERKHNE-SAKUKANSKOYE" (NORTHERN TRANSSBAIKALIA). P. 1. A geological structure of the deposit and identification of ore volcanic rocks

Examination of the nature of the geochemical field in the mesothermal gold deposits formed in a carbonaceous and crystal substratum is continued in comparative aspect. The relation of near vein metasomatic and geochemical halos for the case of inter vein spaces of low gold grade quartz veins is shown on the example of the deposit "Verkhne-Sakukanskoye" of Northern Transbaikalia located in the southwest early Proterozoic frame of the Chara ledge of the Archeozoic base - the western fragment of Aldan panel.

In the first part of the article the geological structure of the deposit, and mineral composition of ores are considered. On the basis of studying of mineral composition and rock structure with attraction of original chemical silicate analyses and petrochemical calculations the plutonic rocks of early Proterozoic Kodarsky complex are diagnosed as hornblende biotite quartz diorite and quartz monzonite.

In the second part of the article for the first time mineralogical petrochemical zonality of near vein metasomatic halos is described, their belonging to the berezite metasomatic formation, and belonging of deposit to the gold subformation of gold-uran-polymetallic berezite ore formation is proved. The geochemical materials revealing distribution on near clarke levels of ore forming elements (Au, Ag, Hg and other) contents in intervein space are presented, genetic connection of near vein geochemical halos with near vein metasomatic ones in frameworks of mesothermal ore-forming process of late Paleozoic epoch is grounded. The obtained results are accorded with conclusions about structure and conditions of geochemical fields formation, made earlier in other mesothermal gold deposits of black shale and non-shale types.

UDC 550.84:553.7

Shestakov B.I.

ON SOURCES OF GOLD ORE DEPOSIT SUBSTANCE AND THEIR WATER DISPERSION FLOWS

On the basis of comparison of differences of ore containing rock clarkes with granite clarkes it is established, that there are only those elements in gold ore deposits and their water flows for which this difference is positive. High correlation of these difference values with abnormal contents of elements in ores and dispersion water flows shows, that the source of these elements is presented by containing rocks. Presence of granitization fields in structure of all investigated deposits shows, that recovery of elements from containing rocks occurs as result of their granitization. It is supposed, that transfer of elements is carried out by pore solutions, and their deposition is result of nonequilibrium state between pore and gravitational waters.

UDC 553.311

Voroshilov V.G.

ON INTERRELATION OF STRUCTURE OF AN ABNORMAL GEOCHEMICAL FIELD WITH THE MECHANISM OF HYDROTHERMAL SYSTEM FORMATION

The model of formation of abnormal structures of geochemical fields during formation of thermo-fluid ore-forming system is proposed. The morphology of these fields is caused by combination of diverging mineral zonality relative to a power source and converging zonality relative to the centers of an ore sedimentation. Influence on an internal structure of abnormal geochemical fields of tectonic conditions of hydrothermal system functioning is shown. Connection of hydrothermal deposit productivity with structure of a geochemical field containing them is grounded.

UDC 550.3:553.44:622.7

Titov D.V.**USE OF GEOPHYSICAL METHODS TO ESTIMATE THE TECHNOLOGICAL PROPERTIES OF PYRITES-POLYMETALLIC DEPOSIT ORES**

The complex of borehole and logging methods providing an operative estimation of their technological properties during deposit prospecting is developed on the basis of studying petrophysical properties of the basic ore minerals and ores. It provides selection of representative technological probes and development of optimal methods of processing of ores on this basis. Formation of physical geological technological model of a deposit will allow to reduce losses of metals on enrichment conversion.

UDC 553.94:552.08:519.233.5

Shumilova O.L.**THE BASIC GEOLOGICAL FACTORS INFLUENCING ON FORMATION OF COAL QUALITY PARAMETERS (on example of the coal deposit "Neryungrinskoye")**

The genetic and epigenetic factors influencing on formation of a coal layer (its characteristics expressed through morphology, petrographic structure, reductivity, metamorphism degree, oxidation, dislocation, physical properties and coal quality parameters) are considered. The primary aim of research was to establish significant factors, in the greater degree influencing on parameters of coal layers quality. This problem is solved from position of the system approach at studying of the rock array consisting in allocation and studying of interconnected elements sets, and estimation of their influence by serial normalization of the basic connections.

Research was carried out in conditions of the layer "Powerful" of the coal deposit "Neryungrinskoye" of the Southern-Yakutsky basin. The experimental data were processed by the correlation – regression analysis methods.

Results of researches allow to use more full geological information and geophysical methods for operational planning of prospecting process and mining works.

UDC 539.16.04

Nikitenkov N.N., Chernov I.P., Tyurin J.I., Skirnevsky A.V., Garanin G.V., Leader A.M., Cherdantsev J.P.**RESEARCHES OF ACCUMULATION OF HYDROGEN IN A ZIRCONIUM ALLOY BY METHOD OF THERMOSTIMULATED GAS EVOLUTION**

Thermostimulated gas evolution from the zirconium alloy Ξ -125 saturated with hydrogen is investigated in dependence on deformation degree. The zirconium alloy samples were subjected to stretching with relative lengthening equal 2,5; 5,0 and 10,0 %, and then were saturated with hydrogen by the electrolytic way at current density equal 0,5 A/cm² in 4 h. Or on the contrary, they were saturated with hydrogen, and then were subjected to deformations. Deformation of zirconium alloy samples results in formation of the traps with different bond energies of hydrogen. And, both bond energy and hydrogen quantity seized in the traps, depend both on deformation size, and from sequence of "deformation – saturation" operations. Values of bond energies of hydrogen in the traps are estimated. The traps types are identified.

UDC 537.9:539.12

Koroteev Yu.M., Guimranova O.V., Chernov I.P.**DIELECTRIC RESPONSE FUNCTION OF THE PdH_x SYSTEM**

Calculations ab initio of electronic structure of pure Pd and PdH_x systems ($x=1, 2, 3$) are carried out within the framework of local density approximation. Full energy of PdH_x systems is calculated for cases of various coordination of hydrogen atoms (okta- and tetrahedron), the conclusion is made about their most probable site in a metal lattice. Imaginary part of dielectric permeability function $\epsilon_2(\omega)$ is calculated in approximation of a constant matrix element. It is found, that dissolution of hydrogen in palladium increases values of $\epsilon_2(\omega)$ function in the

investigated energy area from 2 up to 24 eV. Therefore in the case of radiation action on the PdH_x system it is possible to expect intensive excitation of electronic subsystem of a crystal and, as consequence, decrease of potential barriers for moving of hydrogen atoms.

UDC 535.37

Yuhnik J.B., Behtereva E.S., Sinitsyn E.A., Bulavenkova A.S.**DEFINITION OF POTENTIAL FUNCTION OF AsH₃ MOLECULE ON THE BASIS OF EXPERIMENTAL DATA**

The problem of definition of intramolecular potential function of a molecule of symmetric gyroscope type is considered on the example of the arsine molecule (AsH₃). To solve the given problem the software package in the analytical language MAPLE is developed. It allows to connect parameters of potential function set through symmetric, natural (invariant relatively to isotope substitution) and/or normal oscillator coordinates.

UDC 621.373.826

Shianov D.V., Evtushenko G.S., Suhanov V.B.**TEMPERATURE OPERATING MODE OF THE CuBr+Ne+H₂(HBr) LASER AT CHANGE OF PUMPING**

The analysis of a temperature mode of the laser on copper bromide vapor using active additives of hydrogen (bromhydrogen) at change of pumping parameters is carried out. It is shown, that introduction of the optimal additive increases the discharge tube wall temperature from 620 °C up to 720 °C. The increase of wall temperature on 50...60 °C can occur at change of buffer gas pressure from 3,3 up to 13,3 kPa, and also at change of working capacity twice. It is found, that introduction of the additive raises pressure of working substance vapors in the active media of the laser of average diameter on 6,7 Pa due to interaction of brome, and bromhydrogen with the copper atoms settled on the tube wall. Features of thermal mode of the laser at high frequencies of pulses sequences (up to 100 kHz) are considered.

UDC 539.21(06)

Lerner M.I., Savelyev G.G., Svarovskaya N.V., Galanov A.I.**LOW TEMPERATURE SINTERING OF ELECTROEXPLOSIVE NANOPOWDERS**

Methods of measurement of electric conductivity and transmitting electron microscopy of metal layer being sintered show, that electroexplosive copper and zinc powders are sintered with formation of strength aggregates of corresponding compact metals. It is shown, that self-sintering is the reason of restriction from below of the sizes of metal powder particle obtained by the method of electric explosion of conductors.

UDC 541.16:182

Amelkovich Yu.A., Ilin A.P., Godymchuk A.Yu.**HEATING OF COPPER AND ALUMINIUM NANOPOWDERS IN MIXES WITH ALUMINIUM AND SILICON OXIDES IN AIR**

Oxidation of copper and aluminium nanopowders obtained by the method of electric explosion of a wire, in mixes with inorganic oxides at heating is investigated. It is shown, that at presence of Al₂O₃, SiO₂ and MnO, stability of nanopowders to oxidation raised, what is testified by values of oxidation parameters: temperature of oxidation start, oxidation degree and the maximal speed of oxidation of metal. Oxidizing processes proceeding in nanopowders are slowed down with increase of oxide additives contents

UDC 661.87:519

Filimonov S.V., Skorynin G.M., Orlov A.A., Goldobin D.N.**SIMULATION OF NON-STATIONARY PROCESSES IN INDUSTRIAL CENTRIFUGAL CASCADES OF ENRICHMENT OF URANIUM**

The mathematical model of non-stationary dividing processes of enrichment of uranium in industrial centrifugal cascades which can be used in a computer simulator to prepare experts of dividing production

and application as expert system in the automated control system of the technological circuit is developed and realized.

UDC 537.29

Boyko V.I., Kazaryan M.A., Shamanin I.V., Lomov I.V.

ESTIMATION OF SOLVATE SHELL SIZES OF CATION AQUACOMPLEXES IN SALT SOLUTIONS

The problem of definition of the sizes of overmolecular formations (cluster), consisting of the molecules of water co-ordinated around a central ion is analytically solved. The obtained values of the cation aquacomplex sizes point out possibility to excite their drift by applying of asymmetric electric field with frequency in range from hundreds of Hz up to units of kHz on water salt solutions. Drift parameters are determined by inertial properties of aqua complexes, that allows to organize their division.

UDC 77.021.11:541.14

Shvayko I.L., Zvidentsova N.S., Gavrilova N.V., Sozinov S.A., Morozova T.V., Kolesnikov L.V.

INFLUENCE OF IONIC BALANCE ON THE PROCESS OF MICROCRYSTALS AgBr (111) MATURING

Research of the found effect of photosensitivity level increase is carried out during maturing of microcrystals AgBr with octahedron facets (111) without addition of sulphur containing additives (own maturing). It is established, that formation of the sensitivity centers occurs during modification of the AgBr (111) microcrystal form owing to difference of chemical potentials of microcrystal sides. Thus, direct proofs of the silver nature of the sensitivity centers at maturing of AgBr (111) microcrystals in researched conditions are obtained. The reasons of absence of own maturing effect for AgBr microcrystals of a cubic facet (100) and flat AgBr (T-MK) microcrystals are discussed.

UDC 544.52

Surovoy E.P., Bugerko L.N., Rasmatova S.V.

PHOTOLYSIS OF LEAD AZIDE IN CONTACT WITH COPPER OXIDE (I)

It is found, that alongside with decrease of photolysis speed and photocurrent in the field of own absorption of $PbN_6(Am)$ addition of Cu_2O expands the area of spectral sensitivity and preliminary processing of systems by light ($\lambda=365$ nm) increases photolysis rate. As a result of measurements of voltampere characteristic, contact potential difference, contact photovoltage the model of system $PbN_6(Am) - Cu_2O$ photolysis including stages of generation, recombination, redistributions of nonequilibrium carriers in a contact field, formations of photolytic products and also formations of microheterogeneous systems $PbN_6(Am)-Pb$ (photolytic product) – Cu_2O is proposed.

UDC 542.883

Kozik V.V., Liseenko O.V., Ikonnikova L.F., Borilo L.P.

RESEARCH OF THE POWDER SURFACE ACIDITY AND PROPERTIES OF THIN FILMS OF THE $Ta_2O_5 - La_2O_3$ SYSTEMS, OBTAINED BY THE SOL-GEL METHOD

The thin films and the powders of $Ta_2O_5 - La_2O_3$ system are obtained by the sol-gel technology. Physical and chemical properties of the synthesized films – adhesion, electric resistance, thickness, refraction factor and acid-basic properties of a powder surface – are investigated. Diagrams of the "structure – refraction factor, surface acidity" state are built.

UDC 543.544.45

Gavrilenko M.A.

USE OF AN COPPER PHTALOCYANINE ADSORPTION LAYER FOR SUBTRACTION OF SPIRITS IN GASOCHROMATOGRAPHIC ANALYSIS

The chromatographic properties of silica gel with the phtalocyanine copper surface layer are investigated. Parameters of hydrocarbons and oxygen – containing organic substances keeping differ for the la-

yers obtained by sorption method and chemical synthesis that is connected with structure of the complex on the carrier surface. Sorbents are used for the analysis of oxygen – containing compound admixtures and subtraction of spirits at the group analysis of oxygen – containing organic substances.

UDC 536.7:615.5

Bondarev A.A., Smirnov I.V.

ESTIMATION OF INTERACTION ENERGY OF SOME FUNCTIONAL GROUPS OF MEDICAL SUBSTANCES WITH PROTEIN MOLECULES IN A WATER CONDITION

The basic energetic effects at formation of organic substance complexes with protein molecules which determine thermodynamics of this process are investigated with use of not empirical quantum-chemical DFT (density functional theory) method. Formation of complexes is considered as replacement of water in solvated protein and organic compound molecules. The determining role of strong hydrogen bond contributions and hydrophobic effect in stability of the formed complexes is shown.

UDC 665.61.033.28

Loskutova J.V., Judina N.V.

INFLUENCE OF A MAGNETIC FIELD ON THE STRUCTURAL-RHEOLOGICAL PROPERTIES OF OILS

Influence of a sign-variable magnetic field on the structural-rheological properties of oils with the various contents of resin is investigated. The optical absorption spectra of oils and asphaltene fractions before and after magnetic processing are obtained. With the help of the laser photocorrelation spectroscopy method it is shown, that magnetic processing essentially influences on the associate sizes of dispersed phase of oil systems.

UDC 533.6.011

Galkin V.M.

ABOUT CHOICE OF FUNCTIONAL FOR ONE VARIATIONAL PROBLEM OF GAS DYNAMICS

The numerical solution of the variational problem of construction of supersonic nozzle with an uniform output flow by a direct method is considered. The way of choice of the functional to be minimized is proposed. Comparison with the result received by other method is carried out.

UDC 536.21+692.2:691.327:666.973.2:666.64-492.3

Khutornoy A.N., Cusin A.Ya., Tsvetkov N.A., Miroshnichenko T.A., Kolesnikova A.V.

NON-STATIONARY SPATIAL HEAT TRANSFER IN A NON-UNIFORM EXPANDED-CLAY LIGHT WEIGHT CONCRETE WALL

The thermal condition of a non-uniform three-layer expanded clay light weight concrete wall fragment with face warming on flexible connection is investigated with the help of mathematical simulation. Character of temperature field distribution in an expanded clay light weight concrete construction is established. The estimation of the influence zone of flexible connection on the wall temperature field is carried out. The developed numerical methods allows to carry out thermal express examination of outward non-uniform expanded clay light weight concrete walls with various thermophysical and geometrical characteristics of system materials in real operation conditions.

UDC 621.1.016.4

Makeev A.A.

DETERMINATION OF THERMAL RESISTANCE OF SMALL THICKNESS PIPE WALLS FROM THE HEAT FLOW DENSITY CHANGE

The thesis grounding the structural dependence of thermal resistance of pipes wall materials, made of boiler-houses steels in dimensional thickness, where effects of boundary temperature jumps crea-

ting distortions in measurements of heat conductivity factor are displayed, are presented. The established dependences are explained from positions of structural crack formation in near surface areas.

UDC 662.6

Zavorin A.S., Buvakov K.V., Gladkov V.E., Krasilnikova L.G.

MINERALOGICAL IDENTIFICATION OF THE MACROCOMPONENTS OF INORGANIC PART OF THE KANSK-ACHINSK COALS

Results of research of mineral formations in composition of coal samples with different ash content with application of the expanded complex of the physical and chemical methods allowing to increase reliability of revealing of ash-forming components in a coal with the purpose to estimate variants of their transformation as applied to technologies of preparation and burning of coal, and interaction with gaseous products of these technologies are presented.

UDC 621.311:614.715

Budilov O.I., Budilov D.O., Zavorin A.S.

THE KYOTO MINUTES MECHANISMS FOR MODERNIZATION OF HEAT POWER ENGINEERING

The main principles of the international mechanisms of influence on restrictions of hotbed gas emissions in the atmosphere, established by the Kyoto minutes to the UN frame convention on change of a climate, and possibility to apply them in the Russian heat power engineering for technical re-armament of heating power stations are considered.

UDC 621.9.01

Pushnykh V.A., Bibik V.L.

ASSESSMENT OF INPUT DATA INFLUENCE ON THE RESULTS OF TEMPERATURE CALCULATION IN A CUTTING AREA

Influence of initial data for calculation of temperatures in a cutting zone on the average cutting temperature is considered. The factors rendering the most essential influence on cutting temperature value are determined on the basis of computer simulation.

UDC 539.375

Solyanick A.S., Shchedrivy K.V.

METHOD FOR DETERMINATION OF CRACK – RESISTANCE CHARACTERISTICS OF METAL PLATES AND SHELLS OF SMALL THICKNESS

The method for testing of small thickness metal plate crack – resistance is presented. Features of such tests, including occurrence of buckling in places of fastening of plates, corrugations because of loss of stability at out-center loading are shown. Ways to eliminate these lacks with the help of special equipment are specified. Tests by the offered technique allow to make recommendations on technology and a choice of steels at creation of valve tapes.

UDC 699.7.054.847

Dmitriev V.S., Gladyshev Ju.G.

SENSITIVE ELEMENTS OF THE SUPPORTING DIRECTION THE EAST-WEST WITH A OSCILLATING MASS FOR THE GRAVITATION INERTIAL COMPASS

Construction of devices for tool orientation based on action of Coriolis force on a mass oscillating along the place vertical is considered. The possibility of technical realization of sensitive elements of the gravitation-inertial compass on the basis of the orientation mechanism of alive organisms is shown.

UDC 621.0

Dubovik V.A., Pashkov E.N.

STATIONARY ROTATION OF AN UNBALANCED ROTOR WITH THE LIQUID AUTOBALANCING DEVICE AT ACTION OF EXTERNAL FRICTION FORCES

Influence of external friction forces on rotation of the rotor with a liquid autobalancing device is considered. The liquid in the balancing chamber at stationary movement rotates together with the rotor as a solids. Analytical expressions for a shaft deflection, system disbalance and the necessary rotational moment from the engine providing rotation with set speed are obtained.

UDC 621.375.026

Titov A.A., Pushkarev V.P.

THE AMPLIFIER OF UNIPOLAR PULSES OF THE NEAR RADIOLOCATION SYSTEM

The amplifier of videopulses intended for work as a source of the pulse power of Hannah diodes 3A763A-M of the near radiolocation system is described. The amplifier characteristics are: factor of amplification 16 dB; the maximal amplitude of output pulses 6 V; the maximal current in a pulse 2,5 A.

UDC 629.78.01

Mikhaylov M.V., Kazantsev Ju.M.

THE INTEGRATED MODEL OF POWER SUPPLY CHANNELS OF THE STATIONARY PLASMA ENGINE

The integrated model of power supply channels of the stationary plasma engine, including solar battery models, the channel of the anode-cathode discharge and power supply systems is investigated. The algorithm of model functioning and the diagrams of the discharge current and voltage for various modes of engine work is shown. With the help of the obtained diagrams the greatest overregulation is determined in system with four closed feedback and the conclusion about its stability is made on the basis of "the filter hypothesis". The proposed model allows to simulate all operating modes of power supply system, and also to model various variants of engine start and work of various types of thermothrottles.

UDC 629.783:5233+519.7+62-69

Tsapko G.P., Tsapko S.G., Tarakanov D.V.

THE BASE PRINCIPLES OF CONSTRUCTION OF E-NETWORK MODEL OF A COMPLEX TECHNICAL SYSTEM

Methodological bases of construction of dynamic models of hybrid systems with use of principles of "block" modelling on the basis of the E-network formalism are presented. The submitted technique is based on use of mechanisms of hierarchical interaction of dynamic model elements. Principles of the organization of E-network hierarchical circuits with use of rigid and flexible structures are shown. The mechanism of interaction of static and dynamic components is specified.

UDC 004.657

Shestakov N.A.

INDEXING OF THE SPATIAL DATA IN THE MICROSOFT SQL SERVER 2000 SDBC

In the environment of the Microsoft SQL Server 2000 SDBC 2 circuits of spatial indexing are realized. The experimental test of the realized methods for window inquiries is carried out. Comparison of the realized methods with available in the given SDBC by standard means of indexing is carried out. To find the quadrant splittings in methods of Z-and XZ-indexings the heuristic algorithm which gives the smaller mistake of approximation in comparison with standard algorithm is proposed.

UDC 681.3

Zimin V.P., Homyakov E.A.

THE "BRAINSTORM" SYSTEM MEDIA FOR SUPPORT OF THE INHERITED SOFTWARE

The problem of support of the inherited software, arising at support of existing applied program packages is analyzed. The decision of the given problem with the help of BrainStorm v. 1.0 system me media MS Windows which allows to create and support the software packages earlier executing in MS-DOS is proposed. The basic mechanisms of software realized in BrainStorm are described. Results of testing of the given tool means are presented.

UDC 543:681.3.066

Tereshchenko O.V., Tereshchenko A.G., Tereshchenko V.A., Janin A.M., Tolstihina T.V.

DEVELOPMENT OF LABORATORY INFORMATION-CONTROLLING SYSTEM

Results of the actual direction of work of the scientific research Institute on High Voltage on development of the ЛИС/ЛИУС "Chemist – Analyst" for automation of activity of analytical laboratories are presented. Functions of the complex and methodological principles of its development are considered, comparison with foreign analogues is carried out. The model of the production analytical control with use of concepts of the laboratory life, methods and probe is described.

UDC 613.952:681.3.01

Gergel O.M.

ESTIMATION OF ADAPTABLE ABILITIES OF CHILDREN IN THE EARLY NEONATAL PERIOD WITH THE HELP OF INTEGRAL CRITERION ON THE BASIS OF INTELLECTUAL BIOMEDICAL SYSTEM

One of perspective approaches to estimation of a health state of children in the early neonatal period based on the integral information criterion, in intellectual biomedical system is considered. The urgency of research of adaptable processes in children in the early neonatal period is shown. Structure, possibilities and features of realization of the biomedical system developed in C++ Builder environment are described.

UDC 336.14

Kazackov V.V.

BUDGETARY FEDERALISM IN RUSSIA: SCENARIOS OF DEVELOPMENT

Problems of budgetary federalism in the Russian Federation and possible scenarios of its development are discussed taking into account the international experience and its projecting in the Russian reality.

UDC 336.6+336.12

Urman N.A.

TO THE QUESTION OF NON-UNIFORMITY OF ECONOMIC DEVELOPMENT OF BUDGETARY MAINTENANCE OF TERRITORIES

On the basis of the analysis of economic development of 10 regions the significant disproportions in levels of dynamics of financial provision per capita in independence of a economy state level are revealed. Attempt to estimate influence of economic parameters on the state of tax base, and as result, on quality of regional budgets filling is made. On its results conclusion about necessary of essential improvement of quality economic as well as of budgetary planning.

UDC 339.138

Artyukhova T.Z.

ESSENCE AND FEATURES OF INTERRELATION MARKETING

For the first time the objective nature and the reasons of becoming of interrelation marketing, as modern form of economic processes management on macro- and microlevels is presented. Process and stages of becoming of interrelation marketing, its purposes and tasks

for various forms of the production activity organization is analyzed; the urgency and value of introduction of the given concept of marketing for the Russian experts in marketing is reported.

UDC 330.34:316.422

Eremin V.V.

THE MARKET OF DYNAMICALLY CONTINUOUS INNOVATIONS

The article is devoted to revealing of essence of the dynamically continuous innovation market in its interrelation with marketing. The characteristic features of continuous innovations are considered, it is marked, that the last do not demand change of consumers behaviour, facilitating distribution of the goods – novelties, the concept of "radical innovations" is entered, merits and demerits of the breaks analysis method are determined, the formula of consumption break is deduced.

UDC 330.35

Perevozshchikova N.N.

QUALITY OF ECONOMY GROWTH AS A CONDITION OF OVERCOMING OF POVERTY OF THE WORKING POPULATION OF RUSSIA

It is proved, that economic growth on itself it is insufficient to achieve steady decrease of poverty. The necessary condition of successful struggle against poverty is not only achievement of high rates of economy growth, but also its quality. Overcoming of poverty of the working population of Russia is the problem not so much of social policy, how many the question of realization of strategy of qualitative growth of the economy, allowing to provide access to the population to productive employment.

UDC 330.567.22

Ryzhkova M.V.

ANALYSIS OF METHODOLOGICAL APPROACHES IN THE CONSUMER BEHAVIOR THEORY

Characteristic features and axiomatics of orthodox neo-classic models of consumer behavior are determined, directions of its development are revealed. The analysis of empirical checks of model is carried out. The conclusion about the limited abilities of verification of the revealed preferences theory as bases of considered model is made. The role of irretrievable costs of the consumer decision as the factor breaking axiomatics of the revealed preferences theory is analysed. It is offered the post-keyncian model of a consumer choice as practically more acceptable and including interdisciplinary aspect of consumer behavior.

UDC 330.55

Groshev A.R.

THE ANALYSIS OF METHODICAL APPROACHES TO AN ESTIMATION OF GROSS NATIONAL PRODUCT TAKING INTO ACCOUNT THE ECOLOGICAL FACTOR

The conclusion that in system of ecological-economic parameters the special place is occupied by economic damage from ecological infringements is made. For the correct estimation of this damage it is necessary to form system of the economic parameters, being capable to reflect dynamics of the surrounding natural environment state under influence of development of economic processes. Being expressed economically, the environment state, in turn, will change all system of economic parameters, including criteria of economic development.

UDC 630:334

Trubchenko T.G.

CORPORATIZATION AS A PRIORITY DIRECTION OF REFORMING OF WOOD BRANCH

The concept of reforming within which framework concepts "re-organization" and "re-structuring" are differentiated is considered. Concepts "wood branch reforming" and "wood branch re-structuring" are given. One of priority directions of wood branch reforming – a corporatization, i.e. formation of the enterprises of corporate type,

including development of the integrated corporate structures is actualized. Various approaches to definition of these structure concept are considered. The basic merits and demerits of formation of the integrated structures at the present stage are determined.

UDC 130.2:62

Stepanov A.A., Zolnikova L.M.

PHILOSOPHY OF TECHNIQUE AND ITS SUBJECT

Attempt to construct the object of research of technique, specifying it in system of philosophical disciplines, and being capable to integrate various approaches and directions in this knowledge branch is undertaken. The author position consists that the object of technique philosophy research is presented by relations of technique to the world and the man. The technique, at such approach, appears as means of harmonization of human being with the nature world. The subject of technique philosophy differs from general philosophical object of research by strongly pronounced creative aspect.

UDC 37:01,301:151

Antropyanskaya L.N.

DEVELOPMENT OF HUMANISATION AND HUMANITARISATION PROCESSES IN THE MODERN EDUCATIONAL SPACE

The humanisation and humanitarisation processes occurring today are considered in aspect of the modern continuous education. Formation and development of the young expert, creative and competitive on a modern labour market goes on the background of activation of decentralization process of higher education and orientation toward innovative training.

UDC 77.01:316.7

Guiniyatova E.V.

INFLUENCE OF SOCIAL PRACTICES ON A DISCOURSE SPACE OF A PHOTOGRAPHY

Influence of advertising and body practices on a photographic image is analyzed. The presented analysis shows, that under influence of these phenomena intrinsic characteristics of the photography are displaced on periphery.

UDC 81.2

Petrunina S.P.

TECHNIQUE OF THE CAMERAL PROCESSING OF A MATERIAL AT STUDYING OF SYNTACTIC BUILDING OF RUSSIAN DIALECTS OF MIDDLE OB REGION

Specificity of the cameral processing of a language material at studying of dialect syntax is revealed. The technique for its carrying out on the regional material is offered.

UDC 373.5

Kozlova N.V., Sivitskaja L.A., Kachalov N.A.

INNOVATIVE EDUCATIONAL TECHNOLOGIES AS THE CONDITION OF DEVELOPMENT OF PROFESSIONAL COMPETENCE OF HIGHER SCHOOL TEACHERS

The role of innovative educational strategy in development of professional pedagogical competencies of a higher school teacher is

considered. Results of research of the pedagogical competence, showing prevalence of gnostical components are presented. Conditions of improvement of professional skill of higher school teachers, directed on development of such competence components, as design, organizational and communicative ones in accordance with requirements of the modern innovative education are grounded.

UDC 54:378:37.041(07)

Buynovsky A.S., Medvedeva M.K., Molokov P.B., Stas N.F.

THE TECHNOLOGY OF TRAINING DIRECTED ON DEVELOPMENT OF THE STUDENT INDEPENDENCE

Problems of training of chemistry in the high schools, connected with lacks of school preparation of students on this discipline are considered. The technology of training based on complex use of the modern training means at lecturing and carrying out of the express – check before beginning of each lecture, that provides intensification of educational process, raises a teaching efficiency, develops independent work of students. is described.

UDC 371.048

Mikhaylova N.S.

THEORETICAL AND METHODICAL FEATURES OF PREPARATION OF PRETEST EXPERTS IN THE TPU CONDITIONS

One of the ways to improve quality of education – presence of objective tools for measurement of educational achievements – is connected with presence of the qualified experts – testologists, their preparation is possible in conditions of the system of continuous education. The offered model of preparation of competent experts in the field of pedagogical measurements is based on features of processes of diagnostics, test designing and the general principles of pedagogical examination. It is based on the research experience of teachers of the pedagogical measurements chair of the TPU engineering pedagogics institute.

UDC 908

Ishchenko O.V.

THE STUDENT MOVEMENT IN THE TOMSK TECHNOLOGICAL INSTITUTE IN THE FIRST YEARS OF ITS EXISTENCE (1901–1903)

The characteristic of student movement in the Tomsk technological institute in the initial period of its existence is given. Basing on the archives data the author shows in chronological sequence participation of Tomsk students in the all-Russian student movement, opens the reasons of student's protest actions and attitude to them of the part of the Siberian society.

UDC 549(092)

Pshenichkin A.J.

PROFESSOR ALEXEY MIKHAYLOVICH KUZMIN (to the 115-anniversary from birthday)

The life and activity of professor Alexey Mikhaylovich Kuzmin (1891–1980), one of the large researchers of Siberia bowels, the head of the mineralogy and crystallography chair of the Tomsk polytechnical institute is described.