

Pedagogical Sciences

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The Results of Experimental Monitoring of Foreign Language Communicative Competence Development in Technical University Students

Keywords: foreign language communicative competence (FLCC), technical university, experiment.

Abstract: The description of the research work of FLCC development for students of technical college is given, the main results are considered.

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A.V. Vertaev

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A Competence Development Process Model for Making Optimal Managerial Decisions by Cadets of Military Higher Education Institutions of Internal Troops of the MIA Russia

Keywords: competence; criteria and indicators of competence; method of specific situations; process model; pedagogical technology; managerial decision-making; process of competence building; service and fighting situations; model stages.

Abstract: The article discusses the nature and structure of the author's model of competence development process for optimal managerial decisions by cadets of military higher education institutions of internal troops of the MIA of Russia, using the method of specific situations; the author explores the degree of the effectiveness of the proposed model when used in the educational process of the universities to study the process of this competence development, acquisition of new knowledge about it, the integral understanding of the factors that influence it, as well as conducting the experiments with elements of the given process to improve its effectiveness.

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M.V. Vinokhodova

Orenburg State University, Orenburg

Developing Value Orientations in High School Students Using Modern Museum Practices

Keywords: axiological potential; Fatherland; high school students; museum practices; value system; value.

Abstract: The article is devoted to a crucial task of developing value orientation in high school students in the modern world influenced by political and socio-economic processes that emphasize the problem of individual's attitude to their country, its history and future. In this regard, the author of the article proves the importance of using the axiological potential of a modern museum in the educational process. The author describes the main types of museum practices, their peculiarities and conditions for efficient use. The author proves and provides scientific credence for the statement that the axiological potential of museum practices is conditioned by persuasive factual knowledge presented in real objects (exhibits) that may arouse school students' interest towards historical monuments, satisfy their need in constant communication with enduring universal values and establish the historical memory, national identity and the feeling of responsibility for continuous development of the world culture and native culture.

page 17-20

G.I. Kochergina

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Short-Term Counseling and Its Application in Psychologist's Work with Employees of an Organization

Keywords: short-term counseling; company psychologist; counseling of employees in an organization; psychological assistance to employees.

Abstract: The article addresses the use of a short-term approach in psychological counseling of employees of an organization. This approach is of interest as a tool for organizational psychologists to help employees resolve their own problems before these problems have an impact on the organization.

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T.N. Kochetkova

Far East State Humanitarian University, Khabarovsk

The Nature of Parents' Attitude to Children in Full and One-Parent Families

Keywords: gender; maternal attitude; paternity; alienation; self-appraisal.

page 24-28

Abstract: The article is devoted to the analysis of child-parent relationship in full and one-parent families. The empirical investigation reveals differences in parents' behavior, which influences the formation of self-appraisals by preschoolers.

A.K. Mazina

Southern Federal University, Rostov-on-Don

Diagnosis and Correction of Preschool Children with Attention Deficit Hyperactivity Disorder

Keywords: hyperactivity; attention deficit; preschool age; correction; monitoring; diagnostics.

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Abstract: This article discusses the new features of diagnosis and correction of pre-school children with attention deficit hyperactivity disorder. The results of the study of attention, hyperactivity, impulsivity, and dynamic monitoring before and after the application of correctional programs in the two groups of children have been described. The object of the study is 59 children of 6–7 years (with a medical diagnosis of ADHD) and 60 children (diagnosed by parents and teachers). The methodological tools for the diagnosis of attention deficit hyperactivity disorder have been used.

E.V. Savchenko

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A Model of Engineer Professional Training Based on Comparing Solutions of Educational and Professional Engineering Tasks when Teaching General Physics

Keywords: general physics course; modeling; engineer professional training; solution of educational tasks; solution of professional tasks.

page 33-37

Abstract: The article describes modern requirements to engineer professional training, conditions for improvement of training in general physics, components of engineer professional competence. The author discusses the generic professional competences formed in students through the course in general physics. Using the comparison of stages used in the solution of engineering and educational tasks, the author described the developed model of realization of professional training in the course of general physics by students of engineering majors.

O.V. Flerov

Vitte Moscow State University, Moscow

Main Psychological and Pedagogical Aspects of Intercultural Communication

Keywords: intercultural communication; personality; psychology; pedagogy; language; perception; emotions; stereotype; ethnocentrism.

page 38-41

Abstract: The article reveals psychological and pedagogical aspects of intercultural communication as a field of humanities. Particular attention is paid to their interconnection in the context of issues of forming personality in a contemporary multi-ethnic society.

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The Role of Science Subjects for the Development of Creative Skills of Secondary School Students

Keywords: scientific thinking; science subjects; creativity.

page 42-45

Abstract: This article discusses the role of science subjects for the development of the creative skills of secondary school students.

Historical Sciences and Archeology

P.B. Bogdanova

Russian State Humanitarian University, Moscow

The Theater Art of the Nineteen Sixties

Keywords: men of the sixties; theater personality; Stanislavsky; ethics.

Abstract: The art of the sixties gave birth to a man with a unique personality and spiritual wealth. Therefore, no matter what the art of the sixties was telling about, first of all, it told us about an individual and protected the individual. The term “socialism with a human face” is a clear manifestation of this principle. Men of the sixties believed that an individual is unique, has spiritual wealth and even talent.

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A.F. Borisov, M.V. Sedova-Bakhenskaya

St. Petersburg State University, St. Petersburg

The Concept of Intellectual Capital in Modern Social and Human Discourse

Keywords: intellectual capital; organizational capital; relational capital; social capital; human capital; innovation capital; process capital.

Abstract: The article analyzes the concept of intellectual capital, discusses the main methodological approaches to its definition. The structure of intellectual capital and its major components have been analyzed. The role of social capital in the formation of attitudinal resources of the organization has been examined. The relation of human and cultural capital has been discussed. The role of social science in the study of the main components of intellectual capital has been described.

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E.A. Istyagina-Eliseeva, E.E. Barienikova

Russian State University of Physical Culture, Sport, Youth and Tourism, Moscow

Physical Education and Sports Activities during the Great Patriotic War

Keywords: physical education; mass sports; military training; history of sports.

Abstract: Despite the people’s hard living conditions during the Great Patriotic War, physical education and sports activities in the country did not come to a halt. Various sports events, spartakiads and championships were carried out; “Ready for Labour and Defence of the USSR” (GTO) program among diverse population groups was promoted.

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A.I. Pavlovsky

Tyumen State University, Tyumen

Dravidian and Aryan in Shaping the Culture of Ancient India

Keywords: Aryans; Dravidians; Hinduism; culture of Ancient India; cultural synthesis; religious pantheon; Harappan civilization.

Abstract: The article compares the effect of the Dravidian and Aryan cultures on the formation of the culture of Ancient India. Analyzing the change in culture of the Aryans in the period of their stay in India, the world transformation era of the Vedas in Hinduism, the author shows that the Dravidian influence led to a radical restructuring of Aryan ideas about the world and lifestyle. It is concluded that the culture of Harappan civilization was a substantial foundation of Indian culture.

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M.E. Ramazanov

Ural State University of Economics, Ekaterinburg

Eurasian Values in the Perception of Russians

Keywords: Eurasian civilization; Eurasianism; classical Eurasianism; national question; orthodoxy; pragmatic Eurasianism; traditional religion; civilization of the West.

Abstract: The article deals with Eurasian way of development for Russia. The accent is made on the relation to Eurasianism values in our country. The author studied the importance of the Orthodox Church and other traditional religions in the modern Russian society. The paper contains a brief study of the national question and the problem of the country’s civilization identity.

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Ch.V. Tigiev

Khetagurov North-Ossetia State University, Vladikavkaz

Prisoners of War in the Social Structure of Provincial Society during the First World War (Case Study of the Terek Region)

Keywords: war; captivity; placement; conditions of detention.

Abstract: The article reveals the main problems associated with the placement and detention conditions of prisoners of war on the territory of the Terek region. First introduced into scientific use the sources can shed light on the sanitary condition of the prisoners, their employment in agriculture field. In addition, the article contains materials about morale of prisoners of war, their attitude to the methods of operation, and as a consequence of the protest. The latter was manifested in the facts of disobedience to the orders of the guards and shoots.

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Information Science, Computer Engineering and Management

D.B. Vladimirova

Perm National Research Polytechnic University, Perm

Classification and Analysis of a Noise Signal Component by Wavelet Analysis Methods

Keywords: wavelet analysis; signal energy; noise; classification of noise; spectral density; color noise; thresholding.

Abstract: The paper considers the method of detection and “color” classification of the noise component of sensor signals of physical quantities, using the methods of wavelet analysis.

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The Solvability of a Boundary Value Problem for a Differential Equation with Deviation of Argument

G.A. Pushkarev, E.Yu.Vorobyeva

Perm National Research Polytechnic University, Perm

Keywords: bounded linear operator; functional-differential equation; boundary value problem; method of monotone operators.

Abstract: The work is devoted to the study of solvability conditions of the negativity of the Green's function for the following point-to-point Valle-Poussin problem:

$$(\Lambda x)(t) = y(t), \quad t \in [a, b]; \quad x(a) = x(b) = 0,$$

where operator $\Lambda: W^2 \rightarrow L$ is defined by equality $(\Lambda x)(t) = x''(t) + \int_a^b x(s) d_s R_1(t, s)$, function

$R_1: [a, b] \times [a, b] \rightarrow R^1$ is measurable in the square $[a, b] \times [a, b]$; total variations $\int_{s=a}^h R_1(t, s)$ and $\int_{s=a}^h R_0(t, s)$ are integrated in absolute value on $[a, b]$; as well as the application of these results to the conditions of unique solvability of a boundary problem for a quasilinear functional differential equations

$$(\Lambda x)(t) = f \left(t, \int_a^b x(s) d_s R_0(t, s) \right), \quad t \in [a, b]; \\ x(a) = \alpha, \quad x(b) = \beta$$

in assumptions: $R_0: [a, b] \times [a, b] \rightarrow R^1$ is measurable in the square $[a, b] \times [a, b]$; $R_0(t, s)$ and does not decrease in s for almost all $t \in [a, b]$.

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M.M. Monakhova, G.V. Putintsev, S.D. Luchinkin, D.V. Mazurok

Vladimir State University named after A.G. and N.G. Stoletovs, Vladimir

Automated Control System of Integrity of Information Security Policy for Networking Equipment

Keywords: automated system; configuration; network equipment; corporate information-telecommunication systems; incident; information security policy; information security; integrity monitoring; network equipment.

Abstract: This article describes an automated control system of integrity of policy information

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security for networking equipment. The system is designed to detect information security incidents involving a change in the configuration of networking equipment. This system is designed for the use in large networks – corporate information networks with clearly defined and clearly formalized baseline.

I.P. Neporozhnev

Perm National Research Polytechnic University, Perm

Automorphism Groups of Systems of Splitting Eight Elements into Fours of Couples and Threes of Couples

Keywords: splitting elements into couples; isomorphisms and automorphisms of splitting systems; groups of automorphisms of various splitting systems.

Abstract: The paper studies automorphism groups of non-isomorphic systems of splitting eight elements into four fours couples and four threes of couples without general couples.

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D.N. Protasov

Tambov State Technical University, Tambov

Teaching Mathematical Modeling to Master Students of Economics Using Company Development Strategy Analysis

Keywords: mathematical methods in Economics; dynamics of a small enterprise development; teaching modeling; development factors influence prediction.

Abstract: The article considers the technology of teaching Master students methods of mathematical modeling, analyzing possibilities to build alternative models and predicting the results of modeling, using the example of choosing the development strategy of credit and investment resources for a small enterprise.

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M.A. Sevodin

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The Characteristics of Risks Arising in Modeling of Interdependent Variables

Keywords: limit values; risk; interdependent value; error of modeling.

Abstract: The paper investigates the risks arising in modeling of interdependent variables. The author describes a method of determining quantitative characteristics of such risks, and formulas determining the characteristics in some special cases.

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Machine Building and Engineering

S.G. Nikolaev, A.L. Kuznetsov

Perm National Research Polytechnic University, Perm

Error Identification in Marine Vector Gyrocompass under Unsteady Vessel Motion

Keywords: accelerometers; gyrocompass; gyroscopes; shiplog; gyrocompass speed error; earth's rotation angular velocity; gravity force acceleration.

Abstract: The problem of inertial errors identification of marine vector gyrocompass using strapdown inertial sensors module and ship log on linear vessel acceleration is investigated.

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V.Yu. Ivankin, F.F. Pepelyaeva

Perm National Research Polytechnic University, Perm

The Choice of Advanced Training Components in Mechanical Engineering

Keywords: use of human resources; professional development; educational technology; staff training.

Abstract: The article presents a number of management decisions aimed at improving the skills of the enterprise employees. The use of training centers allows training of high-level specialists.

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I.A. Petrov

Perm National Research Polytechnic University, Perm

Simulation of Screw-Press Extraction with Consideration of Backward Filtration of Liquid Component of Processed Material

Keywords: screw-press extraction; extrusion; filtration; permeability coefficient; mathematical

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model.

Abstract: A model of screw-press extraction process has been developed in terms of integral characteristics with consideration of backward filtration of liquid component of processed material. The effects of backward filtration on the values of integral characteristics have been estimated.

E.M. Shpilev

Far Eastern State Agrarian University, Blagoveshchensk

A Mathematical Description of the Process of Improving Traction Characteristics of Wheeled Harvester “Yenisei GLC-958” by Installing a Triangular Caterpillar Track

Keywords: combine harvester; triangular metal tracked propulsion; slipping; productivity; mathematical apparatus.

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Abstract: The results of equipping the combine harvester “Yenisei GLC-958” with semi-tracked chassis instead of the driving wheels are described. The use of semi-tracked chassis considerably increased traction characteristics of the harvester. The power balance of mass-produced and the experimental harvesters was calculated. As a result, the technical and economic indicators of harvesting crops have been improved for the waterlogged soil.

Economic Sciences

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Agriculture and Industry in a Globalized World

Keywords: food safety; globalization of the world economy; WTO; competitiveness; agriculture.

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Abstract: For each country, adopting the rules of the WTO, it is important to adjust tool settings for the problematic sectors (primarily agriculture) in consistency with the objectives and priorities of its economy. There is now a need to adapt the national economy to the WTO requirements. Special attention is paid to the creation of conditions for competitive development of the economy.

I.A. Naugolnova

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Factors and Instruments to Reduce Costs in Industrial Enterprises

Keywords: changes in cost factors; tools of reducing costs; organizational and economic mechanisms to reduce costs.

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Abstract: Effective cost management and high quality of products determine the level of competitiveness and sustainability of industrial enterprises of the Russian Federation, and therefore, there is a need to build universal organizational and economic mechanisms to reduce costs, the main part of which is a set of tools.

The author of the article systematizes the main factors affecting the level of expenses, which contributed to the identification and selection of the most effective basic and innovative tools to reduce costs.

O.V. Tomazova

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Evaluation of the Management System of Repair and Renovation of Equipment in Russian Oil and Gas Companies

Keywords: recovery of equipment; oil and gas complex; renovation; repair; management system.

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Abstract: The paper studies the management system of repair and renovation of equipment currently used at oil and gas enterprises; internal and external factors affecting the formation of the management system of repair and renovation of equipment have been identified; the types of repairs used at oil and gas enterprises have been analyzed. The article analyses the structure of the management system of repairs at service organizations and proposes the structure of the management system of repair and renovation of equipment for oil and gas companies.

O.S. Yushkevich

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Foreign Direct Investment: Trends and Prospects

Keywords: foreign direct investment; capital flight; offshore; sanctions.

Abstract: The aim of this article is to analyze the movement of foreign direct investment, the definition of current trends and future prospects. The author has analyzed the dynamics and geographical structure of investment in Russia and in the world. Particular attention is paid to capital outflows and offshore areas of investment to Russia, and from it. If current trends in the economic and political spheres continue, it is recommended to review the existing policies so as to maximize diversification of investors.

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Legal Science

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On the Question of Penal Characteristics of Convicts Released Due to Illness

Keywords: penitentiary characteristic; convicts released due to disease; correction means; socially dangerous diseases.

Abstract: The article deals with penal characteristics of convicts released due to illness. The opinions of scientists who studied this issue have been discussed. Statistical data and legal basis of the execution of punishment of sick convicts have been analyzed.

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Political Science

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On the Theory of Social Inclusion

Keywords: inclusion; exclusion; social activity; social inclusion; marginalization.

Abstract: The spread of pluralism and democracy in the world has led to fragmentation of society and its separation on the basis of group identity. Many groups can be easily integrated into the system of social relations on the principle of equitable treatment. These are religious, racial, linguistic and other groups. However, a number of groups, including the disabled, orphans, and people suffering from socially dangerous diseases require specialized attention from the society, which necessitates the development of inclusive practices.

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M. Naderi

Russian University of Peoples' Friendship, Moscow

Political Tactics and Strategies of Euro-Atlantic Countries in the Afghan Problem

Keywords: USA; Europe; Afghanistan; Islamic countries; regional balance of power.

Abstract: The political essence of the Afghan problem in the context of US foreign policy and international relations in general goes far beyond the particular questions about the form of the possible presence of the international coalition in Afghanistan after the withdrawal of its main forces in 2014, or about the impact of political developments in the country to neighboring countries.

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Construction and Architecture

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Development of Tourism in the Context of Architectural Heritage of Northern Mountainous Region Settlements of Azerbaijan

Keywords: architecture; an ancient settlement; reserve; landscape; monument; Ecological Reserve.

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Abstract: The northern region should be especially noted in the study of urban planning culture of historical settlements in Azerbaijan. Owing to its geographical position and good relations with the ancient caravan routes these territories in the early Middle Ages were known as places of permanent settlement with fortified cities, large buildings with socio-religious purpose and palace constructions. Being in the field of interests of aggressors from neighboring countries, they were attacked from time to time, therefore part of them were wiped off the face of the earth, and the other part which is surrounded by the impenetrable forests and mountain streams, kept their life and the architectural appearance of the medieval housing.

The author analyzed the architectural and landscape specifics of settlements, which became historical and cultural reserves, and made assessment of their town-planning characteristics from the perspective of the construction standards and safety. The author discusses the possibility of using these areas for international business tourism purposes.

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The Principles of Public Service Systems Update in the Urban Environment of Tabriz City

Keywords: service; structure; environment; Tabriz; social activity; center.

Abstract: Being one of the leading trading centers of the Middle East, Tabriz city remains a business center of Iran and the fourth largest city of the Islamic Republic of Iran. Currently, the system of public service doesn't meet the growing needs of its population. The article features the organization of this system, its weaknesses and the need to find better methods of updating the system.

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In this regard, some principles of updating are assumed: the need for preservation of historical values; evolution of the city planning; social activity of residential environment and modern transformation of service systems.

S.A. Sychev

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A Method of Quality Assessment of Block-Module Construction Technology on the Basis of Safety Criterion

Keywords: block rooms; block modules; prefabricated units; prefabricated buildings; modular buildings; quality assessment of construction; speed construction; transformable structures.

Abstract: Using the results of the studies, the analysis of standards, taking into account the modern level of construction technologies, we proposed and justified the assessment criteria for construction of buildings from pre-fabricated three-dimensional modules of various types and modifications made by industrial methods, including "sandwich" or combined structures, depending on variability of construction projects. The choice of the construction technology is based on the need to find sustainable solutions through a continuous analysis of components of the organizational and technological structure. A quantitative description of these components has been made; the process of their selection in accordance with the accepted safety criteria has been formalized. Using the established limiting values of strength reduction one can define reliability indices for certain structures.

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The Role of Ice Storage in Traditional Architecture of Iran

Keywords: glacier; traditional architecture; composition; steadiness; architectural climatology; physical environment.

Abstract: Living in areas with harsh climatic conditions is complicated by many problems. One such problem is the storage of perishable products or storing ice for the hot season. Our ancestors came up with several ways to solve these problems. One of the most intelligent ways our ancestors invented is the creation of ancient types of refrigerators for storing ice – ice storage that can keep ice without using any active energy source. It is very hard to imagine, but in Iran the deficit was a stimulus for inspiration, and from ancient times the population of the country could save and use ice in wild conditions. This article provides an overview of different kinds of ice storage.

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The Yakhchal has been used in Iran since early times, it is one to the special masterpieces of Iran's architecture and it is also the signs of predecessors' intelligence in agreement with the climate. The Yakhchal is an ancient type of refrigerator. Iranian traditional architecture, in its approach to "harmony with nature", has developed a unique architectural culture. Iranian

traditional architecture has diverse capacities to control the architectural environment in harmony with nature.

Chemical Technologies

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Prospects of Using a Single Quantum-Chemical Approach to the Characterization of Aggregate Shapes of Molecules

Keywords: Ab Initio; GAUSSIAN; PM3; basis; descriptors; quantum chemical descriptors; IPOA; hybrid density functional method; method of molecular mechanics; Ab initio method; geometry optimization; semi-empirical methods; phosphonic acid.

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Abstract: The article shows that the 3-21G* basis can indirectly indicate the transitions of one form of molecules to the other (which depends on conditions, e.g. pH) regardless of the quantum visualizer structure set by the user.