Original article

THE BEAUTY OF RUSSIAN KOKOSHNIKS OF THE XVII CENTURY IN PHOTOS FROM THE COSTUME BALL OF 1903

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Abstract. In this article, the author examines the traditional Russian women's headdress in the costume of the XVII century — kokoshnik. Reveals the stylistics of the object, the technique of decoration, regional peculiarities of use, ornamental motifs, color. Due to the low level of study of this issue, in addition to art criticism analysis, archival materials were used.

Original article

ART OBJECT IN THE INTERIOR SPACE: THE EXPERIENCE OF THE VENICE BIENNALE

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Abstract. This article discusses the features of creating and exhibiting art objects, and studies the experience of the Venice Biennale. Samples of visual art, design and architecture are analyzed with the help of art criticism, architectural, axiological, historical and descriptive research methods. Compositional patterns of the subject-spatial environment are revealed by examples of the works of leading architects, artists, sculptors, designers. Modern approaches to the organization of space with the help of art objects are studied. The differences between sculpture, installation and art object are clarified. The principles of representation of art objects are clarified using the theory of symbolic forms of the Cashier. Art objects use the exhibition space of the pavilion, setting the rhythm and scale (either emphasize or defiantly violate the spatial connections of interiors), create a variety of associations, semantic loads, lines of psychological tension, illumination, coloristic and plastic saturation. The experience of the Venice Biennale is an example of approbation, a platform for the implementation of creative searches in combining art objects in the space of exhibition pavilions, both historical museums and specially designed structures. Of course, special exhibition spaces, exhibition pavilions should be created for the exhibition of art objects, and landscaped areas should be set up. The experience of the Venice Biennale is a vivid example of the implementation of such tasks in practice on a global scale. An art object should have: its own philosophy of image, effective selection of materials, use of computer tools. Modern art objects continue the ready-made line.

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Abstract. This work is devoted to the study of the influence of cognitive technologies on the morphology of the flora and fauna of semiotic reality, when creating images of design objects in the cluster of improving the appearance of a person in the implementation of the eclecticism of premillennialism and images of ontological biosystems of flora and fauna in the «Vine — Grail» parure.

Keywords: biosystems, design, grapes, fox, fable, holy grail, biblical tales, symbolism

FINDING THE SHAPE OF AN ART OBJECT BASED ON THE STRUCTURAL AND CREATIVE FEATURES OF THE PENROSE STAIRCASE

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Absrtact. The article is devoted to research of constructive and creative features of Penrose stairs for constructing on their basis art-object in Kaluga branch of Bauman Moscow State Technical University.

Keywords: art-object, Penrose staircase, design-research, construction, creative features

IMAGES OF WORKS OF PLASTIC ARTS AND LITERARY MONUMENTS OF ANCIENT GREECE WHEN CREATING THE PARURE "THEOGONY" IN A RETROSPECTIVE OF THE MYTHOPOETICS OF HESIOD AND OTHER ANCIENT AUTHORS

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Abstract. Research has been carried out to create the image of the parure in the form of its cognitive-mental map, which is defined by the visual-symbolic cognitive information dynamic system (VKIDS) «Cosmos — man — zodiac — jewelry — parure "Theogony"» in the hybrid eclecticism of a locally stable structure (LSS) in the narrative of European antiquity. The main principle of the scientific approach in this project is to develop the integrative properties of the elements of the VKIDS in the direction of improving the communication links of images of zodiac morphology and mythology of Hellas for optimal identification of the individual's personality through design objects. At the same time, it is considered as a result of the impact of cognitive technologies on the ontological and semiotic reality of entities, properties and relationships in the narrative of the translation of space-time symmetry with respect to information-energy, creative modeling of mythopoetics in the synergetic harmony of morphogenesis, coloristics, eidos, ethos and the concept of the postulates of the humanities and natural sciences (astronomy, cosmology, geometry, etc.) within the framework of a post-classical research methodology using a linguistic-combinatorial approach in obtaining an artistic image of jewelry. Emphasis is placed on the need to use the cultural code or metaznak of the ancient poetry of Hesiod.

Keywords: design, cultural code, system, structure, semiotics, cosmos, zodiac, constellations, Hellenic ancient mythology

Original article

DESIGN SOLUTIONS FOR «SMART» HOME

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Abstract. The article deals with the search of creative design solutions for «smart» home. Sufficient and necessary conditions for the definition of «smart» home are considered. An attempt is made to study the components (parameters) of «smart» home by the method of content analysis, soft-analysis and system analysis to develop a mathematical description of the «smart» home.

Keywords: digitalization, robotization, design solutions, «smart» home, education

Original article

OPTICAL COLOR MIXING IN MULTILAYER PORCELAIN PAINTING

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Abstract. The article considers the possibility of using the techniques of academic painting with oil paints on canvas to obtain a picturesque image on porcelain. A classification of pictorial techniques was made, a comparative table is compiled and recommendations are given on the possibility of use.

Original article

MODIFIED ARLAN FIBER WITH INCREASED RESISTANCE TO THERMAL DECOMPOSITION

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Absrtact. The article presents a comparative analysis of the functional properties of Russian Arlan meta aramid fiber. The indicators of the physico-mechanical properties of modified complex filaments and their resistance to pyrolysis in nitrogen current are given in comparison with the level of properties of the original untreated thread and foreign analogues. Resistance to high temperatures in combination with hygroscopicity was noted.

Original article

POLYMER COMPOSITES-SORBENTS WITH INORGANIC FILLERS

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Abstract. Highly filled porous polymer-inorganic composites based on all-high molecular weight polyethylene (matrix) and dispersed fillers — strontium ferrite, nickel ferrocyanide, montmorillonite and zeolite Na-A, for the sorption of radionuclides 90Y, 90Sr and 137Cs were obtained. The kinetics of sorption of the above-mentioned radionuclides from aqueous media by porous polymer film sorbents with a filler content of 70 % by weight, as well as by the reference sorbent KU-2–8 cationite, have been studied. An increase in the efficiency of sorption of radionuclides by sorbents containing strontium ferrite is shown. montmorillonite and zeolite Na-A by an order of magnitude and sorbents containing nickel ferrocyanide by 3 orders of magnitude compared to KU-2–8 cationite.

Original article

neW GeneRaTIOn Of heaT-pROTeCTIVe maTeRIals

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Abstract. In the article presents a flowchart of a method for carbon-carbon composite materials (CCCM) with an internal porous layer production. Also presents the results of studies of the obtained composite materials properties. In the paper shows the effect of carbon black on the porous structure. The influence of the carbon black content on the thermal conductivity of CCCM. The coefficients of thermal conductivity are given for the samples with different porous structure.

Original article

METHOD FOR DETERMINING THE VISCOSITY OF GLASS FROM AN EXISTING ANALOGUE

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Abstract. A method for determining the dependence of viscosity on temperature in the studied range by an indirect method based on the tripartite relationship of viscosity, deformation and temperature for operational control of technological parameters of the flat glass mollation process is proposed.

Original article

InVesTIGaTIOn Of The effeCT Of phOsphORIC anhyDRIDe IOn COnCenTRaTIOn On The lIneaR eXpansIOn COeffICIenT anD DensITy Of Opal Glass

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Absrtact. As a result of high competition in the field of modern production of highly artistic products, including those made of gut overhead art glass, there is a need for their originality and high aesthetic properties. This can be achieved, for example, by increasing the palette of colored glasses and changing their transparency.

Original article

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ACCORDING TO THE CORRECTION FOR IRREVERSIBILITY OF DEFORMATION

Absrtact. The article considers the prediction of deformation processes of geotextile nonwoven materials, taking into account the correction for the irreversible deformation component, the value of

which is calculated from the long-term deformation-recovery process of these materials. The introduction of a correction for the irreversibility of deformation makes it possible to increase the accuracy of predicting the indicated deformation processes.

PROSPECTS FOR COOPERATION BETWEEN RUSSIA AND CHINA IN THE FIELD OF FURNITURE DESIGN

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Adstract. This article explores the prerequisites for cooperation between China and Russia in the furniture industry in recent years, describes the development of the Chinese wooden furniture market, analyzes the advantages and disadvantages of existing approaches to the design of wood products in the People's Republic of China and the Russian Federation. The authors analyze the possibilities of overcoming difficulties in increasing the rate of experience exchange and effective cooperation in the field of furniture design and production at the international level. Within the framework of this study, real cases in terms of cooperation in the furniture industry in recent years are discussed, and a vector for further development of collaboration between designers, design institutions and furniture industries of the two countries is predicted.

Original article

INVESTIGATION OF LASER TREATMENT MODES OF ORGANIC GLASS

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1 Kalashnikov Izhevsk State Technical University, Izhevsk, Russia Abstract. The study of the relationship of laser processing modes with the roughness indicators of the surface of organic glass was carried out, various methods of setting laser processing modes, assessing the quality of the surface are considered, rational laser processing modes are selected.

Original article

ACCOUNTING FOR THE INFLUENCE OF DEFORMATION ON THE PROPERTIES OF GEOTEXTILE NONWOVEN MATERIALS DURING THEIR OPERATION

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Abstract. The article considers the influence of plastic, elastic and viscoelastic deformation components on the performance properties of geotextile nonwoven materials used in road construction.

Original article

STUDY OF DEFORMATION PROCESSES OF GEOTEXTILE NONWOVEN MATERIALS FROM THE POSITION OF SPECTRAL ANALYSIS

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Abstract. The article deals with the deformation processes of geotextile nonwoven materials from the standpoint of spectral analysis of their creep processes. A method for the numerical calculation of the delay spectra of these materials for a mathematical model for predicting deformation processes is presented. A theoretical substantiation of the assumption about the smallness of the statistical delay times of geotextile nonwoven materials is given.

Original article

PREDICTION OF THERMOVISCOLISTIC PROCESSES OF POLYMER TEXTILE MATERIALS FROM THE POSITION OF THE THERMO-DEFORMATION-TIME ANALOGY

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Absrtact. The article deals with the prediction of viscoelastic processes of polymeric textile materials under conditions of variable temperature. The complexity of this prediction lies in the fact that for mathematical modeling of deformation modes of operation of polymeric textile materials under conditions of variable temperature, it is impossible to use traditional mathematical models for isothermal processes. When compiling a mathematical model of the deformation modes of operation of polymeric textile materials under conditions of variable temperature, it is necessary to add one more dimension to the traditional two-dimensional mathematical model, which significantly complicates such modeling. To avoid complicating the mathematical model by adding additional variables, it is proposed to use a thermo-strain-time analogy when modeling the thermoviscoelasticity of polymeric textile materials, the validity of which is not obvious and is only verified experimentally for each material separately.

Original article

QUALITATIVE ANALYSIS OF THE OPERATIONAL PROCESSES OF POLYMER PARACHUTE SYSTEMS AT THE STAGE OF THEIR DESIGN

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Abstract. The article considers a qualitative analysis of the operational processes of polymer parachute systems based on mathematical modeling and numerical prediction of these processes, carried out at the design stage of these systems. Polymeric parachute slings belong to the class of textile materials, because. are ribbons and cords made of synthetic threads. Qualitative analysis of the deformation properties of polymeric parachute lines, including comprehensive studies, underlies the creation of modern parachute systems.

Original article

sOluTIOn Of The pROblem Of InCReasInG The aCCuRaCy Of maThemaTICal mODelInG Of DefORmaTIOn pROCesses Of pOlymeRIC TeXTIle maTeRIals

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Abstract. The article discusses the solution of the problem of improving the accuracy of mathematical modeling of the deformation modes of operation of polymer textile materials, which is important both from the scientific and practical side, since its solution allows obtaining recommendations for the creation of new promising materials with specified functional properties. A method for optimizing mathematical modeling of the fundamental deformation-operational modes of polymeric textile materials is also considered.