ABSTRACT&REFERENCES

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ANALYSIS OF SUCCESSFUL PERSONALITY FORMATION

p. 6-10

Maryana Lykova, Postgraduate Student, Department of Practical Psychology, Ukrainian Engineering Pedagogics Academy, Universitetska str., 16, Kharkiv, Ukraine, 61003
E-mail: lykovamaryana@gmail.com
ORCID: *http://orcid.org/0000-0001-9985-7001*

The article reveals leadership qualities as the preconditions for the successful personality formation. The content of the leadership concept is determined and scientific works about leadership qualities are analyzed. The necessity of studying leadership qualities among student youth is determined. The typology of leadership and structure of leadership qualities are created and include individual psychological personality peculiarities, social and communicative personality traits, generalized individual psychological peculiarities

Keywords: *leadership, leadership qualities, successful personality, student youth, leadership typology*

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METHOD OF SUBLAYER FIRE EXTINGUISHING OF ALCOHOLS BY FIRE EXTINGUISHING AEROSOL

p. 11-15

Volodymyr Balanyuk, PhD, Associate Professor, Department of Combustion Processes and General Chemistry, Lviv State University of Life Safety, Kleparivska str., 35, Lviv, Ukraine, 79007
E-mail: bagr33@ukr.net, bagr9111@gmail.com
ORCID: *http://orcid.org/0000-0003-0853-4229*

Nazariy Kozyar, PhD, Main Control service emergencies Ukraine in Kiev, Volodymyrska str., 13, Kyiv, Ukraine, 01601
E-mail: Kozyar777@ukr.net
ORCID: *http://orcid.org/0000-0001-9082-0771*

Anton Kravchenko, Main Control service emergencies Ukraine in Lviv, Pidvalna str., 6, Lviv, Ukraine, 79008
E-mail: anton.kravchenko101@gmail.com
ORCID: *http://orcid.org/0000-0002-0009-7469*

The results obtained in the work confirm the possibility of using fire extinguishing aerosols based on inorganic potassium salts for the sublayer extinguishing of alcohols in tanks. In comparison with the classical methods of extinguishing, this method provides more efficient and reliable extinguishing of the flame, because the aerosol is supplied under the layer from the liquid in the tank, which ensures complete penetration of the aerosol into the combustion zone, extinguishing purity and high extinguishing rate

***Keywords**: fire extinguishing aerosol, flame retardants, aerosol extinguishing, subsurface fire extinguishing*

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SIMULATION OF THE COLLECTION PROCESS IN A CYCLONE APPARATUS WITH THE FILM FORMATION

p. 16-19

Volodymyr Novodvorskyi, Department of Machines and Apparatus of Chemical and Oil Refinery Productions, National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" Peremohy ave., 37, Kyiv, Ukraine, 03056
E-mail: qwertyqwerty641@ukr.net
ORCID: *http://orcid.org/0000-0002-2895-4506*

Andrii Stepaniuk, PhD, Associate Professor, Department of Machines and Apparatus of Chemical and Oil Refinery Productions, National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" Peremohy ave., 37, Kyiv, Ukraine, 03056
E-mail: ynk@kpi.ua
ORCID: *http://orcid.org/0000-0002-4262-1927*

Ruslan Kychak, Postgraduate Student, Department of Machines and Apparatus of Chemical and Oil Refinery Productions, National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" Peremohy ave., 37, Kyiv, Ukraine, 03056
E-mail: kkrnvh@gmail.com
ORCID: *http://orcid.org/0000-0003-4292-3295*

The proposed cyclone significantly increases the efficiency of the dust-collecting of the composite contamination, which consists of the solid particles and the water vapor, and contributes to decreasing of temperature in the apparatus and the physical and mathematical models of collection in the cyclone are selected and solved. A literary review is carried out and it is determined that it was previously investigated and that the authors did not investigate dust collection. Dust samples were collected and the fractional composition was determined

Keywords: *dust collector, polydisperse dust, apparatus, air purification, cyclone, separator, solid particle*

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GAS CONTENT ON DUAL-FLOW PLATE IN A COMBINED CONTACT DEVICE

p. 19-25

Gennadiy Taranenko, PhD, Associate Professor, Department of Mechanical Engineering and Equipment Industry, Volodymyr Dahl East Ukrainian National University, Tsentralnyi ave., 59-a, Severodonetsk, Ukraine, 93400
E-mail: gtaranenko@ukr.net

A study of dual-flow plates with a large free section, which are proposed to be installed in combination with a package of a corrugated nozzle with an oblique corrugation, is carried out. The package of the nozzle is installed above the dual-flow plate as a separator of the gas-liquid layer, thus, the package of the nozzle is the second zone of contact of the phases in the conditions of mass transfer. Such a combined contact device allows high linear gas velocities.

It has been established that the hydrodynamic characteristics of the combined contact device are practically independent of the diameter of the column apparatus under load conditions in the liquid phase characteristic of rectification processes

***Keywords**: combined contact device, column, geometrical characteristics, rectification, separator, dual-flow plate*

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STUDY OF THE THERMAL EXPANSION COEFFICIENT OF METALS USING THE STRUCTURAL UNITS METHOD

p. 26-31

Aleksandr Mochalov, Doctor of Technical Science, Head of Department, Director, Department of Physics, Institute of Correspondence and Distance Education, Admiral Makarov National University of Shipbuilding, Heroiv Ukrainy str., 9, Mykolaiv, Ukraine, 54025
ORCID: *http://orcid.org/0000-0002-6108-2164*

Natalia Shapoval, PhD, Assistant Professor, Department of Physics, Admiral Makarov National University of Shipbuilding, Heroiv Ukrainy str., 9, Mykolaiv, Ukraine, 54025
ORCID: *http://orcid.org/0000-0002-5452-8148*

Konstantin Evfimko, Senior Lecturer, Department of Physics, Admiral Makarov National University of Shipbuilding, Heroiv Ukrainy str., 9, Mykolaiv, Ukraine, 54025
E-mail: evfimko.k@gmail.com
ORCID: *http://orcid.org/0000-0002-1667-4777*

Sergiy Koval, PhD, Assistant Professor, Department of Physics, Admiral Makarov National University of Shipbuilding, Heroiv Ukrainy str., 9, Mykolaiv, Ukraine, 54025
E-mail: sergiy.koval@nuos.edu.ua
ORCID: *http://orcid.org/0000-0002-3122-6024*

The technique for calculating the thermal expansion coefficient using the structural units method are proposed, allowing to calculate and investigate the dependence of the volume compression and thermal expansion coefficients near the absolute zero point depending on structural units properties and substance thermodynamic parameters. The article presents calculations for some metals. The results can be used in various substance studies near the temperature of absolute zero

***Keywords:** structural unit, thermal expansion coefficient, interatomic distance, atomic displacement*

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SURFACE COMPOSITION OF THE Co-Cr BASED ALLOYS AFTER DIFFERENT LAB DENTURE TREATMENTS USING AUGER ELECTRON SPECTROSCOPY

p. 32-36

Mykhaylo Vasylyev, Doctor of Physics and Mathematics, Professor, Department of Physical Basics of Surface Engineering, Institute of Metal Physics of the National Academy of Sciences, Akademika Vernadskoho blvd., 36, Kyiv, Ukraine, 03142
E-mail: vasil@imp.kiev.ua
ORCID: *http://orcid.org/0000-0002-6049-8483*

Svetlana Voloshko, Doctor of Physics and Mathematics, Professor, Department of Metal Physics, National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", Peremohy ave., 37, Kyiv, Ukraine, 03056
E-mail: voloshkosvetlana13@gmail.com
ORCID: *http://orcid.org/0000-0003-3170-8362*

Petr Gurin, PhD, Associate Professor, Department of Prosthetic Dentistry, Shupika National Medical Academy of Postgraduate Education, Dorohozhytskoho str., 9, Kyiv, Ukraine, 04112
E-mail: dr.huryn17@gmail.com
ORCID: *http://orcid.org/0000-0003-0791-1416*

The aim of this work is analysis of dental Co-Cr-based alloy surface chemical composition after several technological procedures adopted in the dental practice using Auger Electron Spectroscopy (AES). This analysis was performed after casting the alloy samples were subjected to the following sequential treatments: cutting on by the diamond wheel, electric-spark cutting and grinding, electropolishing, exposure in artificial saliva after 2 days after electropolishing

Keywords: *surface treatment, Co-Cr based dental alloys, Auger Electron Spectroscopy, artificial saliva*

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CHEMOMETRIC METHODS FOR RESEARCH OF BIOLOGICAL ACTIVITY OF QUINOLINE DERIVATIVES

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Alexander Brazhko, Doctor of Biological Sciences Head of Department, Department of Chemistry, Zaporizhzhya National University, Zhukovskoho str., 66, Zaporizhzhya, Ukraine, 69600
E-mail: brazhko.o.a@gmail.com
ORCID: *http://orcid.org/0000-0002-5212-2689*

Mikhail Zavgorodniy, Associate Professor, Department of Chemistry, Zaporizhzhya National University, Zhukovskoho str., 66, Zaporizhzhya, Ukraine, 69600
E-mail: zm311270@gmail.com
ORCID: *http://orcid.org/0000-0002-7234-6153*

Eugene Karpun, Department of Chemistry, Zaporizhzhya National University, Zhukovskoho str., 66, Zaporizhzhya, Ukraine, 69600
E-mail: ekarpun@gmail.com
ORCID: *http://orcid.org/0000-0003-1816-812X*

Elena Brazhko, Senior Lecturer, Department of Physiology, Immunology and Biochemistry with the course of Civil Defense and Medicine, Zaporizhzhya National University, Zhukovskoho str., 66, Zaporizhzhya, Ukraine, 69600
E-mail: hellen.brazhko@gmail.com
ORCID: *http://orcid.org/0000-0003-3568-9103*

Yanina Romanenko, Assistant, Department of Pathomorphology, Forensic Medicine and Histology, Donetsk Donetsk National Medical University, Pryvokzalnaya str., 27, Lyman, Donetsk region, Ukraine, 84404
E-mail: zmunchilo18@gmail.com
ORCID: *http://orcid.org/0000-0001-9415-8391*

Anna Bogdan, Assistant, Department of Medical Biology, Donetsk National Medical University, Pryvokzalnaya str., 27, Lyman, Donetsk region, Ukraine, 84404
E-mail: aney.bogdan@gmail.com
ORCID: *http://orcid.org/0000-0003-4397-0501*

An important characteristic of chemical compounds is their biological activity, since its presence may be the basis for the use of the substance for therapeutic purposes, or, conversely, limit the possibilities of its practical application due to the occurrence of side and toxic effects. Computer evaluation of the spectrum of biological activity makes it possible to determine the most promising areas for testing the pharmacological effects of specific substances and weed out potentially dangerous molecules in the early stages of research. Description of the structure of molecules of organic compounds is implemented in PASS using descriptors of atomic neighborhoods (Multilevel Neighborhoods of Atoms)

Keywords: *"structure-activity", spectrum of biological activity, prediction, PASS, predictive ability, QSAR*

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UKRAINIAN PROMETHEUS FROM THE PERSPECTIVE OF ROMANTICISM: Yu. BOIKO-BLOKHIN'S APPROACH TO INVESTIGATION OF TRADITIONAL PLOTS AND CHARACTERS

p. 43-48

Olga Teterina, PhD, Department of History of Ukrainian Literature, Theory of Literature and Literary Creativity, Institute of Philology of Taras Shevchenko National University of Kyiv, Tarasa Shevchenka blvd., 14, Kyiv, Ukraine, 10601

E-mail: olgateterina@ukr.net

ORCID: *http://orcid.org/0000-0002-8722-8707*

The article focuses on Yu. Boiko-Blokhin's understanding of the problem of traditional plots and characters (Shevchenko's interpretation of the character of Prometheus) from the perspective of world and national literary studies of the 20th century and beginning of the 21st century. It is proved that the scholar's approach to investigation of this problem is of great importance for continuous development of Ukrainian comparative literary criticism and "reformatting" of the world Slavic studies in the European space as a whole

Keywords: *traditional plots and characters, archetype, Romanticism, national identity, European context*

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