

GREETINGS OF THE PROGRAM COMMITTEE'S CHAIRMAN	3
GREETINGS OF THE ORGANIZING COMMITTEE'S CHAIRMAN	4
THE PROGRAM COMMITTEE	5
THE ORGANIZING COMMITTEE.....	8
PLENARY PRESENTATIONS	10
YOUNG CHEMIST'S SCHOOL PRESENTATIONS	15
THE CONFERENCE'S ORGANIZERS.....	17
COMPUTER SIMULATION IN THE CHEMICAL TECHNOLOGY AND ENGINEERING.....	28
The use of a porous medium method for modeling fixed-bed reactors with a low tube-to-particle diameter ratio. <i>Tymoteusz Świeboda, Renata Krzyżyska, Anna Bryszewska-Mazurek, Wojciech Mazurek</i>	29
Computer prediction of biological activity of 1,2,4-triazole derivatives of 1,4-naphthoquinone. <i>Nataliia Polish, Oleksii Kurylo, Andriy Karkhut, Lesya Zhurakhivska, Nataliia Marintsova</i>	32
The Use of Case-Based Reasoning for the Choice of Methods for Cleaning Exhaust Gases from Sulfur and Nitrogen Oxides. <i>Yuri Beznosyk, Liudmyla Bugaieva</i>	35
Computational Fluid Dynamics Modeling of Mixing Process for Two-Components Mixture in the Large Scale Reactor. <i>Roman Havryliv, Iryna Kostiv, Sophia Vintoniak</i>	38
Development of the CFD model to the high viscosity fluid mixing modeling. <i>Roman Havryliv, Łukasz Radosiński, Maciej Szudarek, Sylwia Oleś</i>	41
Effects caused by vacancies in carbon nanocluster C ₉₆ and polyaromatic molecule C ₉₆ H ₂₄ . <i>O.S. Karpenko</i>	44
Improving computer simulation of vacuum pumping process of the plasma sputtering system. <i>Roman Sheremeta</i>	46
Modeling Heat and Mass Transfer During Evaporation in the Film Apparatus with Cross Movement Phases. <i>Lukashov V.K., Kostiuchenko Y.V., Timofeev S.V.</i>	48
Mathematical modeling of sorption and desorption dynamics in adsorption systems. <i>Natalia Sorokova, Julia Kolchyk, Rodion Sorokovoi</i>	51
Multiple linear regression of C9 fraction inverted emulsion oligomerization. <i>Roman Subtelnyi, Dariia Kichura, Yevhenii Zhuravskyi, Bohdan Dzinyak</i>	56
DEVELOPMENT, ENERGY AND RESOURCE SAVING IN THE CHEMICAL AND FOOD TECHNOLOGIES.....	58
Slag of thermal power plants as an attractive raw material for porous fillers production. <i>Diana Kindzera, Ihor Mitin, Volodymyr Atamanyuk, Roman Hosovskyi</i>	59
Installation for research of hydrogen sulfide chemisorption from gases by a quinhydrone absorbing solution under pressure. <i>Andriy Slyuzar, Zenoviy Znak, Yaroslav Kalymon</i>	62
Autonomous catalytic hydrogen generator based on bioethanol steam reforming. <i>L.Y. Dolgikh, A.I. Trypolskyi, I.L. Stolyarchuk, Y.I. Pyatnitsky, P.E. Strizhak</i>	67
Study of diffusion processes in carrot particles. <i>Iryna Huzova, Volodymyr Atamanyuk</i>	70

CONTENT

Research of the soybean oil extraction using polar solvents. <i>Anna Hlukhaniuk, Oleksandr Ivashchuk, Yevgen Semenyshyn, Roman Chyzhovych, Tetiana Kuzminchuk, Semen Khomyak</i>	72
Thermal stability of materials of vegetable origin. <i>Tetiana Korinchevska, Viacheslav Mykhailyk</i>	77
State of water during dehydration of sugar beet tissue. <i>Viacheslav Mykhailyk, Tetiana Korinchevska</i>	79
Obtaining bitumen from paraffinic-base crude via joint oxidation of tar and different products of oil processing. <i>Andriy Nagurskyy, Bohdan Korchak</i>	82
Research of valuable substances extraction from alcohol distillery stillage. <i>Oleksandr Ivashchuk, Tetiana Kuzminchuk, Roman Chyzhovych, Semen Khomyak, Yevgen Semenyshyn, Sofiya Kitaieva, Roman Zhrebetskyi</i>	84
Features of Aging of Road Bitumen. <i>Myroslava Donchenko, Oleg Grynyshyn, Yuriy Khlibyshyn</i>	87
The improved evaluation of the duration of the fouled membrane modules regeneration. <i>Serhii Hultienko, Ihor Tereshenko</i>	89
Establishment of energy-saving modes of dispersion and fractionation of pectin-containing powder. <i>Raisa Shapar, Olena Husarova</i>	91
Changes in the properties of semi-synthetic motor oil Castrol 10W-40 during its use in the diesel engine of commercial vehicles. <i>Roman Prokop, Oleh Hrynyshyn, Taras Chervinskyy</i>	94
Complex processing of liquid pyrolysis products. <i>Dariia Kichura, Roman Subtelnyi, Bohdan Dzinyak</i>	98
THE INNOVATIVE TECHNOLOGIES IN THE CHEMICAL AND FOOD INDUSTRIES	101
Se-driven microgel catalysts for oxidation processes. <i>Roman Nebesnyi, Anastasia Pavliuk, Kok Hui Tan, Tetiana Kharandiuk, Volodymyr Ivasiv, Andrij Pich</i>	102
Polypyrazolylborate complexes of the lanthanides: structure, optics and materials. <i>Seema S. S. Pillai, Roman Kresinski, Emil Bojarski, Peter J. S. Foot</i>	105
Supported transition metals oxides and N-hydroxyphthalimide in catalysis of the liquid-phase oxidation of cumene. <i>Suprun Wolodymyr, Sheparovych Roman, Hrynda Yurii, Khavunko Oksana, Opeida Iosyp</i>	106
Silicates as fillers for polymer composites. <i>Oleksandra Dzeikala, dr Miroslawa Prochoń</i>	108
Hydrodynamics of cotton filtration drying. <i>Volodymyr Atamanyuk, Zoriana Gnativ Dauren Dzhanabaiev, Alisher Khusanov</i>	109
Hydrodynamics of cotton stalks filtration drying. <i>Zagira Kobeyeva, Alisher Khusanov, Zoriana Gnativ, Volodymyr Atamanyuk, Dauren Dzhanabaiev</i>	112
Complex hydrogels based on aquasol and polyacrylamide. <i>Chobit M., Kalin D. , Tokarev V.</i>	115
The interaction regularities of acetic and oleic acids esters and triethanolamine. <i>Roman Danyliuk, Anastasiia Komaretska, Stepan Melnyk, Yurii Melnyk</i>	117
Determination of pressure drop in a fixed bed catalytic reactor during ammonia oxidation on nanostructured catalyst. <i>Oksana Dobrovetska, Diana Kindzera, Roman Hosovskyi, Volodymyr Atamanyuk</i>	119

CONTENT

Development of new functional food products based on spreads. <i>Chobit M., Vasylyev V., Panchenko Yu., Usiichuk M.</i>	122
The degree of complexity of the subsolidus structure of three-component systems MgO-Al ₂ O ₃ -FeO, MgO-Al ₂ O ₃ -TiO ₂ , MgO-TiO ₂ -FeO, Al ₂ O ₃ -TiO ₂ -FeO. <i>Oksana Borysenko, Sergey Logvinkov, Galina Shabanova, Andrii Ivashura</i>	124
Modified polylactide composites. <i>Nataliya Semenyuk, Khrystyna Kysil, Galyna Dudok, Volodymyr Skorokhoda</i>	126
Comparison of the adsorption capacity of methylene blue nanostructured composites based on CoMnO ₂ and CuO. <i>Olena Makido, Galyna Khovanets', Natalya Koretska</i>	128
Activity of Magnetically Separable Catalyst Fe ₃ O ₄ in Fenton Type Reaction during Methyl Violet Discoloration. <i>Sheparovych Roman, Opeida Lubov</i>	131
Biosynthesis of silver nanoparticles using extracts of medicinal plants. <i>Kateryna Yatskiv, Diana Zahorodnia, Romana Petrina, Semen Khomyak, Viktoriya Havryliak</i>	133
Improving the Technology of Bitter Tinctures. <i>Iryna Sokolovska, Roman Zhrebetskyi, Oksana Orobchuk, Roman Subtelnyi</i>	134
Application of the method od discrete input pulse energy for energy-efficient production of chelidonium majus extract. <i>Liubov Gozhenko, Georgii Ivanitskyi, Bogdan Tselen, Natalia Radchenko, Anna Nedbailo</i>	136
Hydrogels membranes obtained by modification in the volume. <i>Nataliia Baran, Oleh Suberlyak, Oleksandr Grytsenko</i>	139
Kinetics of adsorption of iron ions (III) by natural zeolite. <i>Vira Sabadash, Jaroslaw Gumnitsky</i>	140
Activation of polyethylene granules. <i>Anastasiya Kucherenko, Olena Nikitchuk, Ludmila Dulebov, Volodymyr Moravskyi</i>	143
Influence of polymer additives on rheological properties of heavy high-viscosity oil. <i>P.Topilnytsky, V.Romanchuk, T.Yarmola</i>	144
Obtaining of modified polyamide from the solution. <i>Natalia Chopyk, Victoria Zemke, Iryna Dovga</i>	147
Transesterification of vegetable oil by ethanol in the presence of heterogeneous catalysts. <i>Yuri Melnyk, Stepan Melnyk, Halyna Mahorivska</i>	148
The process of catalytic hydration of acetylene compounds using a homogeneous catalyst based on gold (I) complex with water-soluble organophosphorus ligands. <i>Ivan Kokhan, Sergiy Kudryavtsev</i>	150
OPTIMIZATION OF BIOCHEMICAL PROCESSES AND BIOENGINEERING	154
Polymer properties to comply with requirements for medical devices. <i>Jorg Vienken</i>	155
Innovative cosmetic raw materials and biologically active compounds in cosmetics chemistry. <i>Sebastian Grzyb</i>	156
Liquid atomization process in medical applications. <i>Tomasz R. Sosnowski, Katarzyna Dobrowolska</i>	159
Atomization of oxygen nanodispersions in isotonic saline for applications in aerosol therapy. <i>Marcin Odziomek, Katarzyna Dobrowolska, Karol Ulatowski, Paweł Sobieszuk, Tomasz R. Sosnowski</i>	161

CONTENT

Proliferation of Rindera graeca transgenic roots in oscillatory rocked disposable bioreactor. <i>Kamil Wierzchowski, Mateusz Kawka, Katarzyna Sykłowska-Baranek, Maciej Pilarek</i>	164
Adaptation of the sensor method for the determination of mixing time in a rocking single-use bioreactor. <i>Mateusz Bartczak, Kamil Wierzchowski, Maciej Pilarek</i>	166
Nanohybrid platform based on carbon material for glucose detection. <i>Maria Kuznowicz, Artur Jędrzak, Teofil Jesionowski</i>	169
Glucose detection in food real samples using an amperometric biosensor. <i>Artur Jędrzak, Maria Kuznowicz, Teofil Jesionowski</i>	171
GREEN CHEMISTRY	173
Supercritical CO ₂ extraction as green and waste-free technology – applications and perspectives. <i>Katarzyna Tyśkiewicz, Marcin Konkol, Agnieszka Dębczak</i>	174
Preparation and characterization of thermoplastic starch/polylactide blends with palmitic acid. <i>Justyna Ostrowska, Magdalena Paluch, Karolina Sołtan, Waldemar Sadurski, Piotr Tyński</i>	176
Convenient and Efficient Suzuki Miyaura Coupling Reactions of Meso-Halogenated BODIPYs. <i>Gökçe Hilal Taşan, Raşit Fikret Yılmaz, Yavuz Derin, Büşra Albayrak Mısır, Ahmet Tutar</i>	184
Biocidal preparations based on thiosulphonates and biosurfactants. <i>Vira Lubenets, Natalia Monka, Ihor Bobalo, Tetyana Pokynbroda, Alla Prokopalo, Olena Karpenko</i>	185
Chemical resistance of biopolymers based on the epoxy resin modified with epoxidised and cyclocarbonated soybean oils. <i>Olha Purikova, Larisa Gorbach, Oleksandr Brovko</i>	188
Synthesis and antibiofilm activity of substituted 1-deazapyrimido[1,2,3- <i>cd</i>]purinium salts. <i>Liubov Muzychka, Oksana Muzychka, Oleg Smolii, Iryna Boiko, Nataliia Hrynychuk</i>	191
Waterborne polyurethane-polyacrylate dispersions of mixed type. <i>Tamara Travinskaya, Alexandra Brykova, Lyudmila Robota, Yuri Savelyev</i>	193
ALTERNATIVE AND NON-CONVENTIONAL ENERGY SOURCES	195
Processing of granules based on peat and sludge. <i>Zhanna Petrova, Yuliia Novikova, Anton Petrov</i>	196
Pyrolysis of polymer waste is a source of motor fuels. <i>Ksenya Hrynyshyn, Volodymyr Skorokhoda, Taras Chervinsky</i>	198
Research of the calorific value of dried alcohol distillery stillage. <i>Oleksandr Ivashchuk, Volodymyr Atamanyuk, Roman Chyzhovych, Tetiana Kuzminchuk, Roman Zhrebetskyi, Sofia Kliaieva</i>	200
ECOLOGY AND SUSTAINABLE DEVELOPMENT. ENVIRONMENTAL PROTECTION	202
Usefulness of facial masks against COVID-19 transmission – an experimental evidence. <i>Tomasz R. Sosnowski, Marcin Odziomek, Agata Dorosz</i>	203
Immobilisation of metals in the absorption. <i>Małgorzata Wojtkowska</i>	208
Design of Mg-Al-CO ₃ layered double hydroxides (LDHs) which are capable to remove aqueous selenate (SeO ₄ ²⁻) and selenite (HSeO ₃ ⁻) via direct exchange of the interlayer anions. <i>Natalia Chubar, Małgorzata Szlachta, Vasyl Gerda, Matej Mičušík, Maria Omastova</i>	211

CONTENT

Evaluation of Gross Regional Product Waste Intensity in Context of the SDGs Achievement Progress Assessment. <i>Iryna Dzhygryey</i>	219
Use of Modified Polyacrylamide for Floccuation of Coal Enrichment Wastes. <i>Vasyl Duleba, Zoriana Gnativ</i>	223
Ecologically safe methods of treatment of wastewater from zinc and nickel ions with complex sorbents. <i>Ihor Petrushka, Volodymyr Mokryi, Kateryna Petrushka</i>	224
Polylactide composites with calcium-containing fillers. <i>Andrii Masyuk, Diana Katruk, Volodymyr Levytskyi</i>	226
Research of parameters of industrial waters of canning plant and bakery. <i>Marianna Havryshko, Olena Popovych</i>	228
Mineral fillers modified by shoulders from deodoration columns of oil and fat products. <i>Chobit M., Vasylyev V., Panchenko Yu., Shabikova V.</i>	230
Technological detergents for cleaning compressors of gas turbine installations. <i>Galina Prokofieva, Nina Belousova, Margaryta Berkut, Oleksii Klimenkov</i>	232
CONTENT	234
SPONSORS AND PARTNERS	240