

# CHEMISTRY & CHEMICAL TECHNOLOGY

## CONTENTS OF VOLUME 10

No. 1

Chemistry

---

<i>Vitaliia Mykhalichko and Roman Gladyshevskii</i> Crystal Structure of the Ternary Compound $\text{ErRe}_{0.25}\text{Ge}_2$	1
<i>Tatyana Chernozhuk and Oleg Kalugin</i> Conductivity and Interparticle Interactions in the Solutions of 1-1 Electrolytes in Propylene Carbonate in the Wide Range of Temperatures	9
<i>Andriy Tupys, Oleksandr Tymoshuk and Petro Rydchuk</i> Spectrophotometric Investigation of Cu(II) Ions Interaction with 1-(5-Benzylthiazol-2-yl)azonaphthalen-2-ol	19
<i>Iryna Sobechko</i> Calculation Method of Heat Capacity Change during Organic Compounds Vaporization and Sublimation	27
<i>Volodymyr Levytskyi, Andriy Masyuk, Diana Katruk and Mykhaylo Bratychak</i> Regularities of Obtaining, Morphology and Properties of Metal-Containing Polymer-Silicate Materials and Polyester Composites on their Basis	35
<i>Omar Melad and Mariam Jarur</i> Studies on the Effect of Doping Agent on the Structure of Polyaniline	41
<i>Pavel Kudryavtsev, Oleg Figovsky and Nikolai Kudryavtsev</i> Advance in Nanocomposites Based on Hybrid Organo-Silicate Matrix	45

Chemical Technology

---

<i>Roman Petruk, Halyna Petruk, Rostyslav Kryklyvyi and Iryna Bezvozyuk</i> Technological Aspects of Environmentally Friendly Processes of Domestic Phosphorites Reduction	55
<i>Olena Spas'ka</i> Ultralight Surface-Active Systems for Preventing Liquid Hydrocarbons Evaporation	63
<i>Leonid Bannikov, Anna Smirnova and Serhiy Nesterenko</i> Interpretation of Salts Influence on the Regeneration Process of Rich Thioarsenate Solution by Oxidative Reduction Potential Measurement	67
<i>Natalia Lutsenko, Maria Mironyak, Jurij Panchenko and Volodymyr Tkach</i> Ionometric Determination of Tannins in Industrial Production	73
<i>Ghadir Nazari, Hossein Abolghasemi and Mohamad Esmaili</i> Study of Mass Transfer Coefficient of Cephalixin Adsorption onto Walnut Shell-Based Activated Carbon in a Fixed-Bed Column	81
<i>Hartati Hartati, Alfa Widati, Harsasi Setyawati and Sarita Fitri</i> Preparation of Hierarchical ZSM-5 from Indonesian Kaolin by Adding Silica	87
<i>Olga Alekseeva, Olga Sitnikova, Nadezhda Bagrovskaya and Andrew Noskov</i> Effect of Polystyrene/Fullerene Composites on the Lipid Peroxidation in Blood Serum	91
<i>Oksana Lugovska and Vasyi Sydor</i> Hydrocolloids Effect on the Quality of Oil-Water Emulsion for Foodstuffs and Beverages	97
<i>Merpiseldin Nitsae, Armeida Madjid, Lukman Hakim and Akhmad Sabarudin</i> Preparation of Chitosan Beads using Tripolyphosphate and Ethylene Glycol Diglycidyl Ether as Crosslinker for Cr(VI) Adsorption	105
<i>Nasarullah Zulfareen, Kulanthi Kannan and Thiruvengadam Venugopal</i> Effect of Methanol Extract of <i>Prosopis juliflora</i> on Mild Steel Corrosion in 1M HCl	115

Events

---

<i>Oleg Grynyshyn and Olena Shyshchak</i> Professor Michael Bratychak – 70 <sup>th</sup> Anniversary	I
---	---

No. 2

Chemistry

---

<i>Bogdana Bashta, Volodymyr Donchak, Marta Plonska-Brzezinska, Olena Astakhova and Michael Bratyshak</i> Investigation of Functional Carboxy-Containing Oligomers by IR and NMR Spectroscopy	125
<i>Valentina Chernova, Angela Shurshina, Elena Kulish and Gennady Zaikov</i> Some Approaches to Viscometric Study of Chitosan in Acetic Acid Solution	135
<i>Ostap Ivashkiv, Pavel Kubica, Igor Polyuzhyn, Jacek Namiesnik, Olena Shyshchak and Michael Bratyshak</i> RP- HPLC with Detection by Means of ESI-MS and UV for Identification of Chromatographic Peaks of Some Hydroxy Derivatives of Epoxy Resin	141
<i>Olga Staroverova, Svetlana Karpova, Alexey Iordanskii, Anatoliy Olkhov, Anatoliy Khvatov, Alexandru Mihai Grumezescu, Natalia Kildeeva, Marina Artsis and Gennady Zaikov</i> Comparative Dynamic Characteristics of Electrospun Ultrathin Fibers and Films Based on Poly(3-hydroxybutyrate)	151
<i>Ihor Tarnavchuk, Andriy Voronov, Volodymyr Donchak, Olga Budishevskaya, Olena Kudina, Olena Khomenko, Khrystyna Harhay, Volodymyr Samaryk and Stanislav Voronov</i> Synthesis and Self-assembly of Amphiphilic Oligoesters Based on Pyromellitic Acid	159
<i>Bohdan Dzinyak and Stepan Melnyk</i> Initiated by Organic Peroxides Cooligomerization of Unsaturated Hydrocarbons of C <sub>5</sub> fraction - By-product of Ethylene Production	173
<i>Rajan Patel, Neeraj Dohare and Abbul Bashar Khan</i> Interfacial and Wetting Behavior of Cationic, Anionic and Nonionic Surfactants in the Absence and Presence of Lysozyme	179
<i>Volodymyr Skorokhoda, Nataliya Semenyuk, Iryna Dziaman and Oleg Suberlyak</i> Mineral Filled Porous Composites Based on Polyvinylpyrrolidone Copolymers with Bactericidal Properties	187

Chemical Technology

---

<i>Victor Yavorskiy and Andriy Helesh</i> Waste Gases Cleaning at the Production of Ferrum Oxide Pigment Using Horizontal Apparatus with Bucket-like Dispersers	193
<i>Abhijit Jadhav and Govindraj Mohanraj</i> Synthesis of Activated Carbon from <i>Cocos Nucifera</i> Leaves Agrowaste by Chemical Activation Method	201
<i>Liliya Frolova and Alexander Pivovarov</i> Obtaining of Brown Pigments from Concentrated Waste Water Containing Nickel	209
<i>Heri Kusuma, Ditta Putri, Intan Dewi and Mahfud Mahfud</i> Solvent-free Microwave Extraction as the Useful Tool for Extraction of Edible Essential Oils	213
<i>Oleksandra Voronych, Sergiy Kurta, Volodymyr Starchevskyy and Sofiya Fedorchenko</i> Technology of Recycling, Properties and Use of Polyvinylchloride-Coated Paper Waste	219
<i>Snatika Sarkar and Vijaya Ilango</i> Advancement in Applicability of Carbon Nanotubes in Progressive Fuel Cells	227
<i>Vira Sabadash, Jaroslaw Gumnitsky and Anna Hyvlyud</i> Mechanism of Phosphates Sorption by Zeolites Depending on Degree of their Substitution for Potassium Ions	235
<i>Oleg Budnik, Anatoliy Budnik, Valentin Sviderskiy, Kristina Berladir and Pavel Rudenko</i> Structural Conformation of Polytetrafluoroethylene Composite Matrix	241
<i>Yanuardi Raharjo, Atika Gardena Kartika and Usreg Sri Handajani</i> Analysis of Di-(2-ethylhexyl)phthalate in Plastic Bottles of Drinking Water with Cone-shaped Membrane-Liquid Phase Microextraction	247
<i>Myroslav Malovanyy, Volodymyr Nikiforov, Olena Kharlamova and Olexander Synelnikov</i> Production of Renewable Energy Resources via Complex Treatment of Cyanobacteria Biomass	251

Events

---

<i>Volodymyr Vostres</i> In Memory of Professor Edward Sucharda: Apropos of the 125 <sup>th</sup> Anniversary of Birth	I
---	---

## Chemistry

<i>Touhami Lanez and Meriem Henni</i>	
Spectrophotometrical Study of Antioxidant Standards Interacting with 2,2-Diphenyl-1-Picrylhydrazyl Radical	255
<i>Ludmila Matienko, Larisa Mosolova, Vladimir Binyukov and Gennady Zaikov</i>	
Catalytic Activity of Binary and Triple Systems Based on Redox Inactive Metal Compound, LiSt and Additives of Monodentate Ligands- Modifiers: DMF, HMPA and PhOH, in Selective Ethylbenzene Oxidation with Dioxygen	259
<i>Thanaa Al-muamin, Naemah Al-lami, Suroor Rahman and Rana Ali</i>	
Synthesis, Characterization and Antimicrobial Activity of New Nucleoside Analogues from Benzotriazole	271
<i>Olena Maiboroda and Nathaliia Simurova</i>	
Synthesis of 2-Oxo(thio)-N,4-diaryl-1,2,3,4-tetrahydropyrimidine-5-carbothioamides	279
<i>Tetiana Panchenko, Maria Evseeva, Anatoliy Ranskiy, Vyacheslav Baumer and Olga Gordienko</i>	
Synthesis and Crystal Structure of Cadmium(II) Dichloro-aquasalicylidenesemicarbazone	285
<i>Ilma Cirne, Maria Esperidiao, Jaime Boaventura and Elizabete Lucas</i>	
Preparation and Characterization of Compounds Based on Poly(hydroxymethylacrylamide) and Post-Consumer Polypropylene	291
<i>Vladimir Myshak, Vita Seminog, Tatiana Dmytrieva and Vladimir Bortnitsky</i>	
The Study of the Process of Modification of Recycled Polyethylene with Hexamethylenetetramine	299
<i>Konstantin Vishnevskii, Zhanna Shashok and Nikolai Prokopchuk</i>	
Some Properties of Elastomeric Compositions with High-Dispersed Carbon Additives	305
<i>Anatoly Olkhov and Alexey Iordanskii</i>	
Morphology and Properties of Blends of Poly(3-hydroxybutyrate) with Poly(vinyl alcohol)	311

## Chemical Technology

<i>Pavlo Shapoval, Martyn Sozanskiy, Iosyp Yatchyshyn, Bogdan Kulyk, Mykhaylo Shpotyuk and Roman Gladyshevskii</i>	
The Effect of Different Complexing Agents on the Properties of Zinc Sulfide Thin Films Deposited from Aqueous Solutions	317
<i>Bemgba Nyakuma, Arshad Ahmad, Anwar Johari, Tuan Abdullah, Olagoke Oladokun, Habibu Uthman and Muhamad Halim</i>	
Thermal Decomposition Kinetics of Torrefied Oil Palm Empty Fruit Bunch Briquettes	325
<i>Yuliya Dzyazko, Ludmila Ponomarova, Yurii Volfkovich, Valentina Tsirina, Valentin Sosenkin, Nadiya Nikolska and Volodimir Belyakov</i>	
Influence of Zirconium Hydrophosphate Nanoparticles on Porous Structure and Sorption Capacity of the Composites Based on Ion Exchange Resin	329
<i>Oleg Yurchenko, Olga Kalinenko, Olexandr Baklanov and Larisa Baklanova</i>	
The Use of Ultrasound for Obtaining Pharmaceutical Grade Sodium Chloride	337
<i>Zebo Babakhanova, Mastura Aripova, Nodir Khodjaev and Renat Khamidov</i>	
The Study of the Mineralogical Composition and Flotation Parameters of Quartz-Graphitized Schist	343
<i>Ruslana Kosiv, Tetiana Kharandiuk, Lyubov Polyuzhyn, Liubov Palianytsia and Natalia Berezovska</i>	
Optimization of Main Fermentation of High-Gravity Wort	349
<i>Galyna Kotsay</i>	
Pozzolanic Activity Diagnostics of Fly Ash for Portland Cement	355
<i>Olena Tertyshna, Kateryna Royenko, Vitalina Martynenko, Victoria Smesova, Al'ona Gyrenko and Petro Topilnytskyi</i>	
The Utilization of Asphalt-Resin-Paraffin Deposits as a Component of Raw Material for Visbreaking	361
<i>Alexandra Byelyanska, Mykhola Voloshyn and Valentina Karmazina</i>	
Intensification of Man-Made Waste Methane Fermentation Process in Complex Fertilizer Technology	367
<i>Serhiy Yaitskiy, Liudmyla Bragina and Yuliya Sobol</i>	
Analysis of the Bacor Refractories after their Service in Glass Furnace	373
<i>Anatoliy Danylkovich, Viktor Lishchuk and Olexander Zhyhotsky</i>	
Structural Transformations of Collagen Containing Raw Materials under Alkaline Treatment	379

## Events

<i>Olena Shyshchak</i>	
VIII <sup>th</sup> International Scientific-Technical Conference "Advance in Petroleum and Gas Industry and Petrochemistry" (APGIP-8)	I

<i>Hanane Fodil and Mahmoud Omari</i>	
Synthesis, Structural and Physicochemical Characterization of $BaFe_{1-x}Al_xO_{3-\delta}$ Oxides	387
<i>Deepali Kelkar and Ashish Chourasia</i>	
Structural, Thermal and Electrical Properties of Doped Poly(3,4-ethylenedioxythiophene)	395
<i>Zoryan Pikh, Roman Nebesnyi, Volodymyr Ivasiv, Andriy Pich and Sofia Vynnytska</i>	
Oxidation of Unsaturated Aldehydes by Peracetic Acid	401
<i>Suellem Cordeiro, Leticia Pereira, Marina de O. Simoes and Maria de Fatima Marques</i>	
Synthesis and Evaluation of New Bis(imino) Pyridine Based Catalysts for Ethylene Polymerization	413
<i>Mykhailo Nagornyak, Natalia Figurka, Volodymyr Samaryk, Serhiy Varvarenko, Maria Ferens and Victoria Oleksa</i>	
Modification of Polysaccharides by <i>N</i> -Derivatives of Glutamic Acid Using Steglich Reaction	423
<i>Mykhaylo Yatsyshyn, Viktoriia Makogon, Oleksandr Reshetnyak, Pavlo Demchenko, Nataliya Dumanchuk and Yuriy Stadnyk</i>	
Properties of the Hybrid Glaucanite/Polyaniline Composites Synthesized in the Aqueous Citrate Acid Solutions	429
<b>Chemical Technology</b>	
<i>Ilma Cirne, Jaime Boaventura, Yuri Guedes and Elizabete Lucas</i>	
Methods for Determination of Oil and Grease Contents in Wastewater from the Petroleum Industry	437
<i>Aleksander Hejna, Paulina Kosmela, Milena Kopczynska, Jozef Haponiuk and Lukasz Piszczyk</i>	
Microwave Assisted Liquefaction with Crude Glycerol as a Potential Method of Brewer's Spent Grain Utilization	445
<i>Marcia de Oliveira, Lenise Vieira, Luise Miranda, Daniele Miranda and Luiz C. C. Marques</i>	
On the Influence of Micro- and Macro-Crystalline Paraffins on the Physical and Rheological Properties of Crude Oil and Organic Solvents	451
<i>Roman Hosovskyi, Diana Kindzera and Volodymyr Atamanyuk</i>	
Diffusive Mass Transfer during Drying of Grinded Sunflower Stalks	459
<i>Debora Almeida and Maria de Fatima Marques</i>	
Niobium Oxide as Catalyst for the Pyrolysis of Polypropylene and Polyethylene Plastic Waste	465
<i>Mykhaylo Bratychak, Natalya Chopyk and Victoria Zemke</i>	
Effect of Hydroxyapatite on the Glue Line Strength of the Compositions Containing Polyvinylpyrrolidone	473
<i>Yulia Lukanina, Anatoliy Khvatov, Natalya Kolesnikova and Anatoliy Popov</i>	
The Effect of Cooling Rate during Crystallization on the Melting Behavior of Polypropylenes of Different Chemical Structure	479
<i>Anna Iakovlieva, Oksana Vovk, Sergii Boichenko, Kazimierz Lejda and Hubert Kuszewski</i>	
Physical-Chemical Properties of Jet Fuel Blends with Components Derived from Rapeseed Oil	485
<i>Bemgba Nyakuma, Olagoke Oladokun, Yakubu Dodo, Syie Wong, Habibu Uthman and Muhamad Halim</i>	
Fuel Characterization and Thermogravimetric Analysis of Melon ( <i>Citrullus Colocynthis</i> L.) Seed Husk	493
<i>Tatiana Gridneva, Alexander Kravchenko, Vadim Barsky and Natalia Gurevina</i>	
Obtaining of High Purity Amorphous Silicon Dioxide from Rice Husk	499
<i>Victor Yavorskiy, Yuriy Sukhatskiy, Zenoviy Znak and Roman Mnykh</i>	
Investigations of Cavitation Processes in Different Types of Emitters Using Sonochemical Analysis	507
<i>Tetiana Obushenko, Natalia Tolstopalova, Olga Kulesha and Igor Astrelin</i>	
Thermodynamic Studies of Bromphenol Blue Removal from Water Using Solvent Sublimation	515