

# CHEMISTRY & CHEMICAL TECHNOLOGY

## CONTENTS

### Chemistry

<i>Angelica Macalalad, Quennie Rose Ebete, Dominic Gutierrez, Madelaine Ramos, Bryan John Magoling</i> Kinetics and Isotherm Studies on Adsorption of Hexavalent Chromium Using Activated Carbon from Water Hyacinth	1
<i>Andrey Tokar, Olga Chigvintseva</i> The Quantum-Chemical and Spectral Criteria for Hydrogen Bonding Efficiency in Structural Analysis of Aramides	9
<i>Izabela Kurzydym, Izabela Czekaj</i> Theoretical Studies of DeNO <sub>x</sub> SCR over Cu-, Fe- and Mn-FAU Catalysts	16
<i>Maria Tokareva, Halyna Ohar, Stanislav Tokarev, Yuriy Stetsyshyn</i> Synthesis, Structure and Properties of the Grafted Peptidomimetic Polymer Brushes Based on Poly(N-methacryloyl-L-proline)	26
<i>Volodymyr Anisimov, Volodymyr V. Anisimov</i> Regulation Features of Structure of Linear Block-Copolyurethane Composites of High Wear Resistance	33
<i>Jayanudin, Mohammad Fahrurrozi, Sang Kompiang Wirawan, Rochmadi</i> The Development, Evaluation, and Antioxidant Activity Analysis of Chitosan Microcapsules Containing Red Ginger Oleoresin with Sodium Tripolyphosphate Prepared by Emulsion Cross-linking Technique	40
<i>Volodymyr Dutka, Nataliya Oshchapovska</i> Adsorption of Oligomeric Peroxides on Aerosil and Magnesium Oxide and Their Behavior on the Water-Air Phases Interface	47
<i>Elena Barabash, Yuriy Popov, Yuliya Danchenko</i> The Study of the Influence of Chemical Nature of Functional Groups in Oligomeric and Low-Molecular Modifiers on the Rheological Properties of the Epoxy Oligomer	53

### Chemical Technology

<i>Serhiy Pyshyev, Denis Miroshnichenko, Ivan Malik, Aquilino Bautista Contreras, Nader Hassan, Ahmed Abd ElRasoul</i> State of the Art in the Production of Charcoal: a Review	61
<i>Iryna Blayda, Tetyana Vasyliieva, Nataliia Vasyliieva, Valentyna Khytrych, Svitlana Shuliakova</i> Study of Coal Microbiocenosis for Development of Biotechnological Method for its Desulfurization	74
<i>Ivan Saldan, L'ubomir Orovčik, Oksana Dobrovetska, Oleh Bilan, Orest Kuntuy</i> Chemical Leaching of Al <sub>3</sub> Ni and Al <sub>3</sub> Ti Alloys at Room Temperature	81
<i>Vahid Moghaddam Nansa, Maryam Otadi, Amir Heydarinasab, Rahebeh Amiri</i> Adsorption of Pb Ions from Oily Wastewater by Anthraquinone Modified Carbon Nanotube	89
<i>Iryna Koval</i> Correlation between Diameter of Microorganisms and Efficiency of Microorganisms Destruction under Gas/Cavitation Conditions	98
<i>Serhiy Konovalov, Liubov Patrylak, Stepan Zubenko, Mykhaylo Okhrimenko, Angela Yakovenko, Anton Levterov, Andriy Avramenko</i> Alkali Synthesis of Fatty Acid Butyl and Ethyl Esters and Comparative Bench Motor Testing of Blended Fuels on Their Basis	105
<i>Diana Kindzera, Roman Hosovskyi, Volodymyr Atamanyuk, Dmytro Symak</i> Heat Transfer Process During Filtration Drying of Grinded Sunflower Biomass	118
<i>Iryna Roslyk, Ganna Stovpchenko, Galyna Galchenko</i> Influence of Surfactants on Copper-CNTs Electrodeposition	125
<i>Olena Tertyshna, Konstantin Zamikula, Oleg Tertyshny, Olena Zinchenko, Petro Topilnytskyi</i> Phase Equilibrium of Petroleum Dispersion Systems in Terms of Thermodynamics and Kinetics	132
<i>Volodymyr Starchevskyy, Yurii Hrynchuk, Pavlo Matcipura, Volodymyr Reutskyy</i> Influence of Initiators on the Adhesion Properties of Bitumen Modified by Natural Origin Epoxide	142
<i>Dmytro Symak, Vira Sabadash, Jaroslaw Gumnitsky, Zoriana Hnativ</i> Kinetic Regularities and Mathematical Modelling of Potassium Chloride Dissolution	148

### Events

<i>Olena Astakhova, Olena Shyshchak</i> Professor Michael Bratychak – 75 <sup>th</sup> Anniversary	I
---	---