

## CONTENTS

<i>I. A. Slavova, St. G. Christoskova, M. K. Stoyanova</i> , Catalytic oxidation of Rhodamine B in aqueous solutions with sulphate radicals over $\text{Co}_3\text{O}_4/\text{MgO}$ and $\text{CoFe}_2\text{O}_4/\text{MgO}$ .....	761
<i>F.I. Sapundzhi, T.A. Dzimbova, N.S. Pencheva, P.B. Milanov</i> , Modeling of the relationship between biological activity of delta-selective enkephalin analogues and docking results by polynomials .....	768
<i>S.D. Vlaev, D. Georgiev</i> , Shear on particles exposed to backswept mixing flow with a view to stress-sensitive cell response .....	775
<i>D.S. Hristov, S.K. Velikov, V.E. Vodenicharov, S.P. Tsanova-Savov, F.T. Ribarova</i> , Evaluation of chemical composition, energy and biological value of typical Bulgarian traditional foods derivatives .....	782
<i>L. Dospatliev, M. Ivanova</i> , Spectrophotometric investigations on liquid-liquid extraction systems containing cobalt and tetrazolium salts. Application of the developed method for analysis of the cobalt content of biological samples (mushrooms and tobaccos) .....	787
<i>M. Iv. Slavkova, D. B. Momekova, B. D. Kostova, G. Tz. Momekov, P. D. Petrov</i> , Novel dextran/ $\beta$ -cyclodextrin and dextran macroporous cryogels for topical delivery of curcumin in the treatment of cutaneous T-cell lymphoma .....	792
<i>B. I. Nikolova-Mladenova, S. E. Angelova</i> , Synthesis of 5-nitrosalicylaldehyde based hydrazones and DFT-calculations of their structure and reactivity .....	800
<i>D. S. Nikolova, B. B. Ivanov, D. G. Dobruzhaliiev</i> , Optimal energy management in brewing .....	807
<i>R. Rehman, S. Alam, L. Mitu</i> , Diamond green dye adsorptive removal from water by carrot pulpy waste and potato peels .....	816
<i>R. Rehman, S. Ashraf</i> , Analysis of caffeine contents in commercial beverages and tea samples of Pakistan using UV/Visible spectrometry .....	823
<i>L.-Sh Hu, B.-F. Sun</i> , Experimental studies on a horn-shaped booster pellet .....	829
<i>I. D. Bošković, D. A. Dukić, P. Z. Mašković, L. G. Mandić</i> , Phytochemical composition and biological activity of <i>Echium italicum</i> L. plant extracts .....	836
<i>G. Gece</i> , Theoretical basis for the corrosion inhibition feature of Argan oil .....	846
<i>F. Arjmand, F. Shafiei</i> , Modeling of the physicochemical properties of aliphatic alcohols using topological indices and quantitative structure-property relationship .....	852
<i>U. Vr. Brodnjak</i> , Improvement of physical and optical properties of chitosan-rice starch films pre-treated with ultrasound .....	859
<i>D. Paliulis, A. Krinickaitė</i> , Removal of lead ( $\text{Pb}^{2+}$ ) from synthetic wastewater using calcium pectate .....	868
<i>H. R. Dehghan, A. Negarestani, M. R. Rezaie</i> , Study of the possibility of using IXRF technique to detect the elements present in dust using Monte Carlo N Particles .....	874
<i>B. Radovanović, A. Radovanović, V. Nikolić, N. Manojlović, J. Dimitrijević</i> , Storage effect on phenolic content and antioxidant activity in selected fruit extracts .....	879
<i>Y. Arslan, D. Trak, E. Kendüzler</i> , Preconcentration and determination of cadmium in some samples using solid phase extraction with slotted quartz tube flame atomic absorption spectrometry .....	884
<i>K. Alizadeh, H. Soltani-Afarani</i> , A comparative study on the ionization constants of a Schiff's base in different environments by multiwavelength UV-Vis spectroscopy .....	890
<i>T. T. Bayram, A. Nuhoglu, E. Aladağ</i> , Investigation of biodegradation and growth kinetics of dairy wastewater in a batch reactor .....	896
<i>B. Atabey-Ozdemir, O. Demirkiran, U. Yildiz, I. O.Tekin, B. Coban</i> , Cytotoxicity and DNA binding of copper (II) and zinc (II) complexes of flavonoids: querçitrin, myricitrin, rutin .....	901
<i>B. Coban, N. Eser, I. Babahan</i> , DNA binding by copper (II) complexes of semithiocarbazone containing ligands .....	908
<i>A. P. Gaikwad, V. J. Suryavanshi, M. A. Anuse</i> , Liquid-liquid extraction studies of ruthenium(III) from malonate medium using <i>n</i> -octylaniline as an ion-pairing reagent: study of catalyst and alloys .....	914
<i>A. A. Kaya, O. Üçüncü, S. M. İlter, C. Baltaci, S. Öztürk</i> , Chemical composition and bioactive properties of the essential oil of <i>Rhinanthus angustifolius</i> subsp. <i>grandiflorus</i> .....	923
<i>R. Kowalski, G. Kowalska, U. Pankiewicz, M. Sujka, K. Kalwa</i> , GC analysis in evaluation of changes in fatty acids content of selected fats during storage and heating .....	928
<i>W. Shang, X. Qian, H. Liang</i> , Preparation of modified diatomite filler via a starch-fatty acid complex coating method for improvement of paper strength properties .....	936
<i>Z.Q. Yu, G.S. Zhou, S.D. Zhu, J.M. Li, L.J. Li</i> , Influence of sensitizing treatment on the corrosion resistance of Incoloy 028 alloy .....	943
<i>Z. N. Jia, Y. Y. Yang, X. W. Qi, X. M. Song</i> , Influence of nano-serpentine mineral powder as a lubricating additive on the high-temperature tribological properties of metal friction pairs .....	948
<i>Q. Huo, T. Zhou, J. He, J. Q. Xue</i> , Identification of Clenbuterol by MALDI-TOF Mass Spectrometry .....	955
<i>GuoYing</i> , Quality grading system of Jadeite-Jade green based on three colorimetric parameters under CIE standard light sources $D_{65}$ , CWF and A .....	961

<i>H.L. Yu, J.M. Zhu, Y.S. Zhang, W.Q. Zhang , Zh.Ch. Wang</i> , Study on the water resistance performance of floor rockmass under different fracture combinations .....	969
<i>B. K. Mahatha, R. Nandkeolyar, M. Das, P. Sibanda</i> , Stagnation point nanofluid flow along a stretching sheet with non-uniform heat generation/absorption and Newtonian heating .....	977
<i>A. Akdogan, G. Caliskan Koç, S. N. Dirim</i> , Mathematical modeling of thin-layer microwave drying of corn husk and investigation of powder properties .....	986
<i>N. Chamkouri, V. Zare-Shahabadi, A. Niazi</i> , Ultrasound-assisted dispersive liquid-liquid microextraction with HPLC-UV for the simultaneous determination of Diclofenac potassium and Indomethacin in serum and plasma samples: Experimental design and optimization .....	994
<i>AUTHOR INDEX</i> .....	1001
<i>AUTHORS INDEX (IN BULGARIAN)</i> .....	1009
<i>SUBJECT INDEX</i> .....	1018
<i>SUBJECT INDEX (IN BULGARIAN)</i> .....	1024
<i>INSTRUCTIONS TO THE AUTHORS</i> .....	1029