



Contents of Volume 85

NUMBER 1

Organic Chemistry

- A. Mehrez, I. Chakroun, D. Mtat, H. Ben Mansour and R. Touati*: Synthesis of novel phthalimido oxime pseudoesters and evaluation of their cytotoxicity 1

Biochemistry and Biotechnology

- B. Pavlič, N. Teslić, P. Kojić and L. Pezo*: Prediction of the GC–MS retention time for terpenoids detected in sage (*Salvia officinalis* L.) essential oil using QSRR approach..... 9
- A. M. J. Balaž, M. B. Blažić, N. Popović, O. L. Prodanović, R. V. Ostafe, R. Fischer and R. M. Prodanović*: Expression, purification and characterization of cellobiose dehydrogenase mutants from *Phanerochaete chrysosporium* in *Pichia pastoris* KM71H strain 25

Inorganic Chemistry

- P. Ghorbani, S. Ali Beyramabadi, M. Homayouni-Tabrizi and P. Yaghmaei*: Oxovanadium(IV) complexes of the pyridoxal Schiff bases: Synthesis, experimental and theoretical characterizations, QTAIM analysis and antioxidant activity..... 37

Theoretical Chemistry

- K. K. Yadav, A. Kumar, S. Begam, K. Nurjamal, A. Kumar, G. Brahmachari and N. Misra*: Spectroscopic (FTIR, UV–Vis and NMR), theoretical investigation and molecular docking of substituted 1,8-dioxodecahydroacridine derivatives 53

Physical Chemistry

- J. Ž. Manojlović*: Hysteresis of conductivity in a micellar surfactant solution near the Krafft point 67

Electrochemistry

- E. Goodarzi and B. Mirza*: Electrogenerated base-promoted synthesis of 4-aryl-5-benzoyl-2-hydroxy-6-(trifluoromethyl)-1,4-dihydropyridine-3-carbonitriles nanoparticles by three-component condensation of aromatic aldehydes, malononitrile and 4,4,4-trifluoro-1-phenylbutane-1,3-dione 79

Analytical Chemistry

- D. Snigur, A. Chebotarev, V. Dubovyi, D. Barbalat and A. Klochkova*: Room temperature cloud point extraction: An application to preconcentration and spectrophotometric determination of copper(II) (Short communication) 89

Chemical Engineering

- T. Gagić, A. Perva-Uzunalić, Ž. Knez and M. Škerget*: Hydrothermal treatment of sugars to obtain high-value products..... 97

Environmental

- X. Wang, Z. Li, M. Yao, J. Bao and H. Zhang*: Degradation of carbofuran in contaminated soil by plant–microorganism combined technology 111

- S. Garófalo-Villalta, T. Medina-Espinosa, C. Sandoval-Pauker, W. Villacis, V. Ciobotă, F. Muñoz Bisesti and P. Vargas Jentsch*: Degradation of Reactive Red 120 dye by a heterogeneous sono-Fenton process with goethite deposited onto silica and calcite sand 125

Geochemistry

- F. J. Grbović, G. M. Gajić, S. R. Branković, Z. B. Simić, N. L. Vuković, P. Ž. Pavlović and M. D. Topuzović*: Complex effect of *Robinia pseudoacacia* L. and *Ailanthus altissima* (Mill.) Swingle growing on asbestos deposits: Allelopathy and bio-geochemistry 141

NUMBER 2

Organic Chemistry

- T.-D. Thach, T. T.-V. Le, H. T.-A. Nguyen, C.-H. Dang, V.-S. Dang and T.-D. Nguyen*: Synthesis of sulfonamides bearing 1,3,5-triarylpyrazoline and 4-thiazolidinone moieties as novel antimicrobial agents 155

Biochemistry and Biotechnology

- S. S. Sokovic Bajic, S. B. Mihajlovic, D. D. Radojevic, D. D. Popovic, J. M. Djokic, S. M. Stanisavljevic, M. N. Lazarevic, Dj. M. Miljkovic, P. Ruas-Madiedo, N. E. Golic and M. S. Tolinacki*: Characterization of pH resistance and the proteolytic activity of GABA producing *Lactobacillus brevis* BGZLS10-17 in preparation of fermented milk beverage and the effects on the symptoms of the experimental autoimmune encephalomyelitis 163
- M. Jovanović, D. Vučurović, B. Bajić, S. Dodić, V. Vlajkov and R. Jevtić-Mučibabić*: Optimization of the simultaneous production of cellulase and xylanase by submerged and solid-state fermentation of wheat chaff 177
- Y. Liu, X. Qin, Q. Chen, Q. Zhang, P. Yin and Y. Guo*: Effects of moisture and temperature on pesticide stability in corn flour 191

Inorganic Chemistry

- M. Iqbal, S. Ali, M. N. Tahir, M. A. Haleem, H. Gulab and N. Ali Shah*: A binary copper(II) complex having a stepped polymeric structure: Synthesis, characterization, DNA-binding and anti-fungal studies 203
- R. V. Palaniswamy, M. Dhandapani, J. Suyambulingam and C. Subramanian*: Synthesis, characterization, thermal, theoretical and antimicrobial studies of Schiff base ligand and its Co(II) and Cu(II) complexes 215

Physical Chemistry

- M. Faraji and A. Farajtabar*: Preferential solvation of quercetin in aqueous aprotic solvent mixtures 227

Thermodynamics

- J. Safarov, C. Bussemer, A. Aliyev, G. Ivaniš, M. Kijevčanin, I. Radović, E. Hassel and I. Abdulagatov*: High-temperature and high-pressure (p , ρ , T) measurements and derived thermodynamic properties of 1-octyl-3-methylimidazolium hexafluorophosphate 237

Environmental

- S. Jadhav and D. Jaspal*: Adsorptive eradication of tartrazine from aqueous solutions onto doped polyaniline 251
- M. Bilal, J. Ali, N. Hussain, M. Umar, S. Shujah and D. Ahmad*: Removal of Pb(II) from wastewater using activated carbon prepared from the seeds of *Reptonia buxifolia* 265

NUMBER 3

Organic Chemistry

- N. Manjarrez Alvarez, H. I. Pérez Méndez, A. Solís Oba, L. Ortega Cabello, M. T. L. Carvajal, O. E. Valencia Ledezma and R. M. Martínez-Casares*: Application of the redox system of *Nocardia corallina* B-276 in the enantioselective biotransformation of ketones and alcohols 279

Biochemistry and Biotechnology

- S. Jovanović-Šanta, V. Kojić, K. Atlagić, A. Tot, M. Vraneš, S. Gadžurić and M. Karaman*: Anticancer and antimicrobial properties of imidazolium based ionic liquids with salicylate anion 291
- D. D. Milinčić, A. Ž. Kostić, B. D. Špirović Trifunović, Ž. Lj. Tešić, T. B. Tosti, A. M. Dramićanin, M. B. Barać and M. B. Pešić*: Grape seed flour of different grape pomaces: Fatty acid profile, soluble sugar profile and nutritional value..... 305

Inorganic Chemistry

- N. Rajendran, A. Periyasamy, N. Kamatchi and V. Solomon*: Synthesis and efficacy of copper(II) complexes bearing *N*(4)-substituted thiosemicarbazide and diamine co-ligands on plasmid DNA and HeLa cell lines 321

Theoretical Chemistry

- A. Borota, S. Avram, R. Curpan, A. Bora, D. Varga, L. Halip and L. Crisan*: *In silico* studies on smoothened human receptor and its antagonists in search of anticancer effects..... 335

Electrochemistry

- N. D. Nikolić*: Metal powder electrolysis: The shape of powder particles as a function of the exchange current density and overpotential for hydrogen evolution reaction (Extended Abstract) 347

Polymers

- S. M. D. S. Mohamed, M. S. M. Annuar, T. Heidelberg, N. F. Ansari and N. H. Ismail*: Porous amphiphilic biogel from a facile chemo-biosynthetic route 353

Materials

- Lj. Spasojević, J. Katona, S. Bučko, L. Petrović, J. Milinković Budinčić, J. Fraj, A. Sharipova and S. Aidarova*: Preparation of composite zein/natural resin nanoparticles..... 369

Chemical Engineering

- O. S. Okwundu, M. Fuseini, A. H. El-Shazly and M. F. Elkady*: Comparison of mixing performances of T, Y and arrow-shaped micromixers using Villiermaux–Dushman protocol at low Reynolds number 381

Environmental

- H. D. Yan, J. J. Wu and P. Y. Xu*: Heterotrophic nitrogen removal by a newly isolated microorganism *Oligella* sp. XS68..... 395
- S. B. Radmanović, M. M. Marković, U. D. Jovanović, M. D. Gajić-Kvašček, Dj. M. Čokeša and J. A. Lilić*: Properties of humic acids from copper tailings 20 years after reclamation..... 407
- S. B. Miletić, J. Avdalović, J. Milić, M. Ilić, A. Žerađanin, K. Joksimović and S. Spasić*: Oxidized humic acids from the soil of heat power plant (Short communication)..... 421

NUMBER 4

Organic Chemistry

- P. Vorobyev, A. Serebryanskaya, O. Yugay and T. Mikhailovskaya*: Oxidative ammonolysis of 3,4-dimethylpyridine on the vanadium oxide catalysts 427

Biochemistry and Biotechnology

- M. Zrnić Ćirić, N. Dabetić, V. Todorović, J. Đuriš and B. Vidović*: Beta-glucan content and antioxidant activities of mushroom-derived food supplements 439

Inorganic Chemistry

- M. V. Rodić, V. Miškov-Pajić, V. M. Leovac, M. M. Radanović, Lj. S. Vojinović-Ješić, S. K. Belošević, Ž. K. Jaćimović and V. Živković-Radovanović*: First cobalt complexes with methyl pyruvate semi/thiosemicarbazone – Synthesis, physicochemical and structural characterization 453

Theoretical Chemistry

- R. Amiri, D. Messadi and A. Bouakkadia*: QSAR Study of the octanol/water partition coefficient of organophosphorus compounds: The hybrid GA/MLR and GA/ANN approaches 467
- E. Akbas, E. Yildiz and A. Erdogan*: Synthesis, characterization and theoretical studies of novel pyrimidine derivatives as potential corrosion inhibitors 481

Physical Chemistry

- I. Bibi, T. Kousar, S. W. H. Shah, W. Rehman and F. Ali*: Pseudo-zwitterionic microvesicles for sustained urea release 493

Electrochemistry

- S. Z. Mohammadi, H. Beitollahi, T. Rohani, H. Allahabadi and S. Tajik*: La₂O₃/Co₃O₄ nanocomposite modified screen printed electrode for voltammetric determination of sertraline 505

Analytical Chemistry

- S. Ž. Gorjanović, F. T. Pastor, S. Loupassaki, M. Veljović, P. Vukosavljević, S. Zlatanović and L. Pezo*: Serbian aromatized wine “Bermet”: Electrochemical, chemiluminescent and spectrophotometric determination of antioxidant activity 517

Polymers

- A. Merdoud, M. Mouffok, A. Mesli, N. Chafi and M. Chaib*: *In vitro* release study of 2-aminobenzothiazole from microspheres as drug carriers 531

Environmental

- I. Espinoza, C. Sandoval-Pauker, L. R. Guerrero, P. V. Jentsch and F. M. Bisesti*: Fenton process combined with precipitation for the removal of Direct Blue 1 dye: A new approach 547

History of and Education in Chemistry

- F. K. Baydere, A. Ayas and M. Çalik*: Effects of a 5Es learning model on the conceptual understanding and science process skills of pre-service science teachers: The case of gases and gas laws 559

NUMBER 5

- J. D. Ickovski, J. Lj. Pavlović, M. N. Mitić, I. R. Palić, D. A. Kostić, G. M. Petrović and G. S. Stojanović*: Furofuran lignans of *Artemisia* genus: Isolation, biosynthesis and biological activity (Review) 575

Organic Chemistry

- S. Pagilla, A. K. Kumar, V. Sunitha and A. K. D. Bhavani: PEG-mediated synthesis of 6-pyrazinyl-/fused pyrazinylquinazolin-4(3H)-ones using Castro–Stephen coupling, oxidation and cyclocondensation reactions 601

Biochemistry and Biotechnology

- B. A. Shaikhan, K. Güven, F. M. Bekler, Ö. Acer and R. G. Güven: A highly inducible β -galactosidase from *Enterobacter* sp. 609
- S. Medić-Pap, D. Danojević, D. Prvulović, S. Tančić-Živanov and J. Červenski: Antioxidative response of tomato genotypes to late blight infection 623

Inorganic Chemistry

- B. Dražić, M. Antonijević-Nikolić, Ž. Žižak and S. Tanasković: Synthesis and characterization of copper(II) octaazamacrocyclic complexes with glycine derivatives. *In vitro* antiproliferative and antimicrobial evaluation of the Cu(II) and Co(II) analogues 637

Theoretical Chemistry

- Y. Zhao, X. Xing, S. Zhao and X. Ju: Decomposition mechanism of dihydroxylammonium 5,5'-bis(tetrazole)-1,1'-diolate on Al(111) surface by periodic DFT calculation 651

Physical Chemistry

- S. W. H. Shah, F. Ali and I. Bibi: Quantification of the binding preference of selected dyes at a solid–liquid interface in organized media 661

Materials

- H. Tang, Y. Qiao, X. Dai, F. Tan and Q. Li: Preparation of $\text{FePO}_4 \cdot 2\text{H}_2\text{O}$ from LiFePO_4 mixed with $\text{LiNi}_x\text{Co}_y\text{Mn}_{1-x-y}\text{O}_2$ waste material 671

Chemical Engineering

- A. M. Fuladgar and Z. Vatani: New empirical correlation for oil flowrate prediction through chokes 687

Environmental

- M. Lončarski, A. Tubić, M. Kragulj Isakovski, B. Jović, T. Apostolović, J. Nikić and J. Agbaba: Modelling of the adsorption of chlorinated phenols on polyethylene and polyethylene terephthalate microplastic 697

NUMBER 6

*Editorial***Organic Chemistry**

- I. I. Jevtić, J. Z. Penjišević, K. R. Savić-Vujović, D. P. Srebro, S. M. Vučković, M. D. Ivanović and S. V. Kostić-Rajačić: μ -Opioid/ D_2 dopamine receptor pharmacophore containing ligands: Synthesis and pharmacological evaluation 711

Biochemistry and Biotechnology

- M. S. Kozarski, A. S. Klaus, J. Đ. Vunduk, D. M. Jakovljević, M. B. Jadranin and M. P. Nikšić: Health impact of the commercially cultivated mushroom *Agaricus bisporus* and the wild-growing mushroom *Ganoderma resinaceum* – A comparative overview 721
- V. Filipović, J. Filipović, V. Vucurović, V. Radovanović, M. Košutić, N. Novković and N. Vukelić: The effect of yeast extract addition on bread quality parameters 737

Inorganic Chemistry

- A. W. Kamran, S. Ali, M. N. Tahir, M. Zahoor, A. Wadood and M. Iqbal: Binuclear copper(II) complexes: Synthesis, structural characterization, DNA binding and *in silico* studies..... 751

Theoretical Chemistry

- N. Acharjee: Understanding the regio- and diastereoselective synthesis of a potent antinociceptive isoxazolidine from *C*-(pyridin-3-yl)-*N*-phenylnitrone in the light of molecular electron density theory..... 765

Physical Chemistry

- O. Kochkodan and V. Maksin: Mixed adsorption of hexadecylpyridinium bromide and Triton X surfactants at graphitized carbon black 781

Electrochemistry

- F. K. T. Shafiei, K. Jafarzadeh and A. R. Madram: Copper deposits obtained by pulsating overpotential regime with a long pause and pulse duration from sulfate solutions..... 795

Environmental

- R. D. Đurović-Pejčev, S. B. Radmanović, Z. P. Tomić, L. M. Kaluđerović, V. P. Bursić and Lj. R. Šantrić: Adsorption-desorption behaviour of clomazone in Regosol and Chernozem agricultural soils 809
- A. N. Žerađanin, J. Avdalović, M. Lješević, O. Tešić, S. Miletić, M. M. Vrvic and V. P. Beškoski: Evolution of humic acids during *ex situ* bioremediation on a pilot level – The added value of the microbial activity..... 821
- T. Đ. Mitrović, M. Đ. Ristić, A. Perić-Grujić and S. Lazović: ANN prediction of the efficiency of the decolourisation of organic dyes in wastewater by plasma needle 831

NUMBER 7

Biochemistry and Biotechnology

- S. Oancea, M. Perju and H. Olosutean: Influence of enzyme-aided extraction and ultrasonication on the phenolics content and antioxidant activity of *Paeonia officinalis* L. petals..... 845
- X. Wang, L. Song, Z. Li, Z. Ni, J. Bao and H. Zhang: The remediation of chlorpyrifos-contaminated soil by immobilized white-rot fungi 857
- T. Gagić, Ž. Knez and M. Škerget: Hydrothermal hydrolysis of sweet chestnut (*Castanea sativa*) tannins 869

Inorganic Chemistry

- M. Kosović, S. Novaković, Ž. Jaćimović, N. Latinović, N. Marković, T. Đorđević, E. Libowitzky and G. Giester: Synthesis, crystal structure and biological activity of a copper(II) complex with a 4-nitro-3-pyrazolecarboxylic ligand 885

Theoretical Chemistry

- J. V. Odović, M. A. Crevar Sakač and Z. B. Vujić: The correlation of plasma protein binding and molecular properties of selected antifungal drugs 897

Physical Chemistry

- Z. Wei, Y. Gao, Y. Zhou, C. Jiao, M. Zhang, H. Hou and W. Liu: The extraction of Sr²⁺ with dicyclohexano-18-crown-6 in conventional organic solvent and ionic liquid diluents..... 909

Analytical Chemistry

- E. Keskin, S. Allahverdiyeva, E. Şeyho and Y. Yardim: Determination of tramadol in pharmaceutical forms and urine samples using a boron-doped diamond electrode 923

Polymers

- S. Temel, E. Yaman, N. Ozbay and F. Ozge Gokmen*: Synthesis, characterization and adsorption studies of nanocomposite hydrogels and the effect of SiO₂ on the capacity for the removal of Methylene Blue dye 939

Chemical Engineering

- S. Meshram, C. Thakur and A. B. Soni*: Fixed bed adsorption treatment of effluent of battery recycling unit to remove Pb(II) using steam-activated granular carbon..... 953

Environmental

- A. Akyüz, Z. Akyurek, M. Y. Naz, S. A. Sulaiman and A. Gungor*: Hydrogen conversion using gasification of tea factory wastes..... 967

NUMBER 8

- S. Ž. Drmanić, P. Petrović, D. R. Brkić, A. D. Marinković and J. B. Nikolić*: A survey on the characterization and biological activity of isatin derivatives (Review)..... 979

Biochemistry and Biotechnology

- S. Č. Jovanović, O. P. Jovanović, Z. S. Mitić, G. M. Petrović and G. S. Stojanović*: Chemical composition and distribution of the headspace volatiles in commercial culinary herbs and spices: Chemometric approach 1001
- A. Jurić, U. Gasić, I. Brčić Karačonji, K. Jurica and D. Milojković-Opšena*: The phenolic profile of strawberry tree (*Arbutus unedo* L.) honey (Short communication)..... 1011

Theoretical Chemistry

- B. Ž. Milovanović, M. M. Petković and M. R. Etinski*: Properties of the excited electronic states of guanine quartet complexes with alkali metal cations..... 1021
- M. Yavari, S. Ali Beyramabadi, A. Morsali and M. R. Bozorgmehr*: (*E*)-4-(((2-Amino-5-chlorophenyl)imino)methyl)-5-(hydroxymethyl)-2-methylpyridin-3-ol and its Cu(II) complex: Synthesis, DFT calculations and AIM analysis..... 1033

Physical Chemistry

- V. Galaguz, O. Korduban, E. Panov and S. Malovanyi*: The use of Raman and XPS spectroscopy to study the cathode material of LiFePO₄/C..... 1047

Chemical Engineering

- W. Li, H. Liu, J. Li, C. You, J. Luo and L. Sun*: Mass transfer process study of Fe (III) extraction from ammonium dihydrogen phosphate solution..... 1055

Environmental

- S. Bulatović, N. Marić, T. Šolević Knudsen, J. Avdalović, M. Ilić, B. Jovančićević and M. M. Vrvic*: Bioremediation of groundwater contaminated with petroleum hydrocarbons applied at a site in Belgrade (Serbia)..... 1067
- R. Zahedi, H. Ghafourian, Y. Zamani, S. Khoramnejhadian and R. Dabbagh*: Study of carbon dioxide and methane adsorption on carbon molecular sieves, raw and modified by waste engine oil 1083

NUMBER 9

- N. K. Stanković, B. M. Todorović Marković and Z. M. Marković*: Self-assembly of carbon-based nanoparticles films by the Langmuir–Blodgett method (Review) 1095

Organic Chemistry

- V. Ramanujan, S. Sadikha and C. N. S. P. Kumar*: Stereoselective synthesis of (–)-tetrahydropyrenophorol..... 1129

Biochemistry and Biotechnology

- S. Zarf and I. Arman: In vitro and in silico analysis of the effect of fluconazole, an antifungal drug, on DNA* 1137
- D. V. Plavšić, M. M. Škrinjar, Đ. B. Psodorov, L. L. Pezo, I. Lj. Milovanović, D. Đ. Psodorov, P. S. Kojić and S. D. Kocić-Tanackov: Chemical structure and antifungal activity of mint essential oil components*..... 1149

Theoretical Chemistry

- L. H. Mendoza-Huizar, C. H. Rios-Reyes and H. Zuñiga-Trejo: A computational study of the chemical reactivity of isoxaflutole herbicide and its active metabolite using global and local descriptors*..... 1163
- M. Wu, Y. Wang, X. Tan and J. Gu: Theoretical study on the reaction between phosphacyclopentenylidene and ethylene: An alternative approach to the formation of phosphorus-bearing heterocyclic compounds* 1175

Electrochemistry

- J. S. Čović, A. R. Zarubica, A. Lj. Bojić, T. M. Troter and M. S. Randelović: Electrochemical study of novel composite electrodes based on glassy carbon bulk-modified with Pt and MoO₂ nanoparticles supported onto multi-walled carbon nanotubes*..... 1185

Polymers

- I. Mirković, M. S. Nikolić, S. Ostojić, J. Maletaškić, Z. Petrović and J. Djonlagić: Thermo-responsive hydrogels based on poly(*N*-isopropylacrylamide) and hyaluronic acid cross-linked with nanoclays*..... 1197

Materials

- M. Abniki, A. Moghimi and F. Azizinejad: Fabrication of bionanocomposite based on LDH using biopolymer of gum arabic and chitosan-coating for sustained drug-release* 1223

History of and Education in Chemistry

- A. Dekanski: Belgrade School of Electrochemistry*..... 1237
- Erratum* 1251

NUMBER 10

Organic Chemistry

- U. S. Ameuru, M. K. Yakubu, K. A. Bello, P. O. Nkeonye and A. Z. Halimehjani: Synthesis and dyeing performance of some amphiphilic naphthalimide azo disperse dyes on polyester fabrics*..... 1253

Biochemistry and Biotechnology

- D. Zhang, D. He, X. Pan and L. Liu: Systematic profiling of ATP response to acquired drug-resistant EGFR family kinase mutations* 1265

Inorganic Chemistry

- T. Keškić, D. Radanović, A. Pevec, I. Turel, M. Gruden, K. Anđelković, D. Mitić, M. Zlataar and B. Čobeljić: Synthesis, X-ray structure and DFT calculation of magnetic properties of binuclear Ni(II) complex with tridentate hydrazone-based ligand*..... 1279

Theoretical Chemistry

- W. López-Orozco, C. H. Rios Reyes and L. H. Mendoza Huizar: Theoretical investigation of the molecular structure and molecular docking of naratriptan* 1291

Physical Chemistry

- B. S. Đorđević, D. Z. Troter, V. B. Veljković, M. Lj. Kijevčanin, I. R. Radović and Z. B. Todorović*: The physicochemical properties of the deep eutectic solvents with triethanolamine as a major component..... 1303

Electrochemistry

- A. D. Forero López, A. P. Loperena, I. L. Lehr, L. I. Brugnoli and S. B. Saidman*: Corrosion protection of AZ91D magnesium alloy by a duplex coating..... 1317

Analytical Chemistry

- Lj. Damjanović-Vasilić, V. Bikić, S. Stojanović, D. Bajuk-Bogdanović, Đ. Džodan and S. Mentus*: Application of analytical techniques to the unveiling of the glazing technology of medieval pottery from the Belgrade Fortress..... 1329

Materials

- R. Orouj, M. Rashidzadeh, A. Irandoukht and S. Sadighi*: Investigation the effects of Al-grafting and calcination temperature on the acidity and physicochemical properties of silica SBA-15 1345

Chemical Engineering

- S. Gondudey, P. K. Chaudhari, S. Dharmadhikari and R. S. Thakur*: Treatment of sugar industry effluent using an electrocoagulation process: Process optimization using the response surface methodology 1357

Environmental

- S. Meseldžija, J. Petrović, A. Onjia, T. Volkov-Husović, A. Nešić and N. Vukelić*: Removal of Fe²⁺, Zn²⁺ and Mn²⁺ from the mining wastewater by lemon peel waste 1371

NUMBER 11

- N. L. Ignjatović, S. Marković, D. Jugović, V. Uskoković and D. P. Uskoković*: From molecules to nanoparticles to functional materials (Authors' review)..... 1383

Organic Chemistry

- B. Pouramiri, M. Zahedifar, A. Ayati, F. Pouramiri and M. Ahmadi*: Design, synthesis and biological evaluation of new substituted benzofuran-based derivatives *via* C–H bond activation..... 1405

Biochemistry and Biotechnology

- O. Lj. Šovljanski, A. M. Tomić, L. L. Pezo, A. S. Ranitović and S. L. Markov*: Prediction of denitrification capacity of alkalotolerant bacterial isolates from soil – An artificial neural network model 1417

Inorganic Chemistry

- D. M. Popović and I. S. Đorđević*: Catalytic center of cytochrome c oxidase: Effects of protein environment on the p*K*_a values of Cu_B histidine ligands..... 1429

Theoretical Chemistry

- M. Miar, A. Shiroudi, K. Pourshamsian, A. R. Oliaey and F. Hatamjafari*: DFT study and NBO analysis of solvation/substituent effects of 3-phenylbenzo[*d*]thiazole-2(3*H*)-imine derivatives..... 1445

Polymers

- B. Wang, J. Ma and X. Ma*: Synthesis, characterization and fluorescent performance studies of novel diphenyl sulfone-functionalized water-soluble polymer 1463

Materials

- L. Radovanović, J. D. Zdravković, B. Simović, Ž. Radovanović, K. Mihajlovski, M. D. Dramićanin and J. Rogan*: Zinc oxide nanoparticles prepared by thermal decomposition of

zinc benzenepolycarboxylato precursors: Photoluminescent, photocatalytic and antimicrobial properties 1475

Geochemistry

R. M. M. Saheed, T. Šolević Knudsen, M. A. M. Faraj, Z. Nikolovski, H. P. Nytoft and B. Jovančičević: Saturated biomarkers in the estimation of organic geochemical homogeneity of crude oils from four oil fields in Libya 1489

EuCheMS News 1501

NUMBER 12

S. Jeremic, J. Milovanovic, M. Mojicevic, S. Skaro Bogojevic and J. Nikodinovic-Runic: Understanding bioplastic materials – Current state and trends (Survey)..... 1507

Organic Chemistry

B. Srečo Zelenovič, S. Grabež, M. Popsavin, V. Kojić, J. Francuz and V. Popsavin: Synthesis and antiproliferative activity of simplified goniofufurone analogues 1539

Biochemistry and Biotechnology

J. Mudrić, Z. Drinić, G. Zdunić, M. Todosijević, D. Bigović, N. Menković and K. Šavikin: Stabilization of rose hip oil with pomegranate peel extract during accelerated storage..... 1553

J. D. Ickovski, K. D. Stepić and G. S. Stojanović: Composition of essential oils and head-space constituents of *Artemisia annua* L. and *A. scoparia* Waldst. et Kit. (Short communication) 1565

Inorganic Chemistry

M. Zlatar, F. Vlahović, D. Mitić, M. Zlatović and M. Gruden: Assessment of density functional approximations for calculation of exchange coupling constants in thio-cyanato and cyanato double bridged binuclear Ni(II) complexes 1577

P. B. Stanić, M. V. Rodić, T. V. Soldatović, A. B. Pavić, N. S. Radaković, B. M. Šmit and M. D. Živković: Reaction of a 3-arylidene-2-thiohydantoin derivative with polymeric *trans*-[CuCl₂(DMSO)₂]_n complex: unexpected isomerization to dinuclear *cis*-[CuCl(DMSO)₂](μ-Cl)₂ 1591

Analytical Chemistry

N. N. Mijatović, A. M. Terzić, L. L. Pezo, Lj. R. Miličić and D. Z. Živojinović: Improvement and modification of the energy-dispersive X-ray fluorescence method for the determination of metal elements in cement leachates – A chemometric approach..... 1605

Materials

A. M. Ivanovska and M. M. Kostić: Electrokinetic properties of chemically modified jute fabrics 1621

Chemical Engineering

S. S. Popović, M. D. Iličić and I. L. Gáspár: Enhancement of ultrafiltration of milk proteins by application of twisted tapes: A sensitivity analysis using a response surface methodology 1629

Environmental

J. M. Prodanović, M. B. Šćiban, D. V. Kukić, V. M. Vasić, N. T. Blagojev and M. G. Antov: The purification of natural coagulant extracted from common bean on IRA 958 Cl anion exchange resin 1643

Contents of Volume 85 1657

Author index 1667