



Contents of Volume 89

NUMBER 1

Organic Chemistry

- M. S. Nešić, M. D. Nešić and N. S. Radulović: Assignment of NMR spectral data of diastereomeric tetrahydrofuranyl acetals directly from their mixture by spectral simulation..... 1

Biochemistry and Bioengineering

- S. M. Stajčić, L. L. Pezo, G. S. Četković, J. M. Čanadanović-Brunet, A. I. Mandić, V. T. Tumbas Šaponjac, J. J. Vulić, V. N. Travičić and M. M. Belović: Antioxidant activity according to bioactive compounds content in dried pumpkin waste 13

Inorganic Chemistry

- L. Todan, D. C. Culita, M. E. Soare, R. M. Ion, R. C. Fierascu and M. Maganu: Immobilization of natural betalain pigments in inorganic hosts 29

Theoretical Chemistry

- C.-W. Liu, M.-H. Liu, T.-M. Wang, C.-L. Chen and T.-H. Ting: Study of the metal ion adsorption capacity of palygorskite by computer simulation..... 39

Physical Chemistry

- R. K. Allabergenova, D. A. Bobkova, E. M. Borodina, T. A. Kryuchkova, E. B. Markova, T. F. Sheshko, N. N. Lobanov and A. G. Cherednichenko: Synthesis, characterization, and catalytic properties of GdCoO₃ for dry reforming of methane 51

Electrochemistry

- H. D. Tran, U. P. N. Tran and D. Q. Nguyen: [BMIm][PF₆]/silicon oil/multi-walled carbon nanotubes paste electrode: Electrochemical properties and application for lead and cadmium ion determinations..... 63

Polymers

- N. M. Edres, I. A. Buniyat-Zadeh, S. B. Aliyeva, S. M. Turp and R. M. Alosmanov: Structure and thermal stability of phosphochlorinated polybutadiene/carbon black composite synthesized via oxidative chlorophosphorylation reaction 79

Materials

- R. Brahmi, K. Diaf, Z. Elbahri and M. Baitiche: Preparation and *in-vitro* evaluation of single and bi-layered beeswax-based microparticles for colon-specific delivery of mesalamine 91

Chemical Engineering

- S. Toufouki, A. Ali, Y. Wang, R. Li, Y. Cao and S. Yao: Deep eutectic solvents formed by pharmaceutical ingredients and their potential influences on solid preparations 107

Environmental

- R. Zein, H. Fathony, P. Ramadhani and D. Deswati: Facile chemical activation process of kapok husk as a low-cost biosorbent for removal methylene blue dye in aqueous solution 123

NUMBER 2

Organic Chemistry

- J. B. Nikolić, N. Ž. Prlainović, G. M. Šekularac, L. R. Matović, A. M. Lazić and S. Ž. Drmanić*: The synthesis, characterization, antioxidant and antimicrobial activity of some novel amides of the esters of substituted 1,4-dihydropyridines 141

Biochemistry and Bioengineering

- L. Kosychova, L. RekoVIC, I. Bratkovskaja, I. Radveikiene and R. Vidžiūnaitė*: Oxidation of 1,5-benzodiazepine oximes catalysed by peroxidases 151

Inorganic Chemistry

- K. B. Sakhare, K. N. Sarwade, Y. N. Bharate and M. A. Sakhare*: Anticancer activity of Schiff base ligand (*E*)-4-((5-chloro-2-hydroxybenzylidene)amino)-1,5-dimethyl-2-phenyl-1*H*-pyrazol-3(2*H*)-one and its Co(II), Cu(II) and Zn(II) metal complexes.... 165

Theoretical Chemistry

- S. A. Ejaz, M. Aziz, A. Fayyaz, T. A. Wani and S. Zargar*: Computer-aided approach for the identification of lead molecules as the inhibitors of cholinesterase's and monoamine oxidases: Novel target for the treatment of Alzheimer disease 177

Physical Chemistry

- S. S. Hemdan and R. Alnajjar*: The non-ideality in binary aqueous systems contributed to the different abilities of solvent entities incorporated in the solvation shell of methylene blue 195

Polymers

- B. Anwar, C. Nurhashiva, W. Raihanah Arwa and G. Yuliani*: Physicochemical properties of bioplastic based on hydroxyethylcellulose and polyvinylpyrrolidone blend 215

Materials

- M. M. Mirković, I. D. Bracanović, A. D. Krstić, D. D. Đukić, V. M. Dodevski and A. M. Kalijadis*: Removal of lead and cadmium from aqueous solution using octacalcium phosphate as an adsorbent..... 231

Metallurgy and Metallic Materials

- K. Pravinkumar, V. Seshagiri Rao and R. Sathish*: Inhibition study of curcumin extract's effect on dissimilar aluminium joint 245

Environmental

- B. Arsić, S. Petrović, J. Mrmošanin, I. Dimitrijević, S. Tošić, G. Stojanović, S. Glišić and J. Milićević*: Stability and computational analyses of selected pesticides in use in the Republic of Serbia..... 259

History of and Education in Chemistry

- A.-A. J. Holik and D. D. Trivic*: The effects of online learning about the Brønsted–Lowry theory of acids and bases in the first grade of grammar school during the COVID-19 pandemic..... 275

NUMBER 3

Organic Chemistry

- D. B. Andrić, S. Đukić-Stefanović, M. J. Krunić, I. I. Jevtić, J. Z. Penjišević, V. B. Šukalović and S. Kostić-Rajačić*: Synthesis, computational and pharmacological evaluation of novel *N*-{4-[2-(4-aryl-piperazin-1-yl)ethyl]phenyl}-arylamides 291

Biochemistry and Bioengineering

- M. E. Popović, M. Stevanović and M. Mihailović*: Breaking news: Empirical formulas, molar masses, biosynthesis reactions and thermodynamic properties of virus particles – Biosynthesis and binding of Omicron JN.1 variant of SARS-CoV-2 305
- A. Eren, F. Matpan Bekler and K. Güven*: PCR-based detection of alkane monooxygenase genes in the hydrocarbon and crude oil-degrading *Acinetobacter* strains from petroleum-contaminated soils..... 321

Inorganic Chemistry

- M. A. de Assis Pires, C. T. de Carvalho and T. A. D. Colman*: Exploring the properties of uranyl nicotinate: Synthesis, characterisation and thermal analysis..... 335

Theoretical Chemistry

- A. N. Pankratov*: The cyanide, cyanate, thiocyanate ambident anions: Structure, topological analysis of electron density and homolytic oxidative coupling regioselectivity 349
- A. Bitang, V. Bitang, V. Grosu, A. Ciorsac and A. Isvoran*: ADMET profiles of selected anabolic steroid derivatives..... 367

Physical Chemistry

- S. S. Lazarević, M. T. Mihajlović-Kostić, I. M. Janković-Častvan, Đ. T. Janačković and R. D. Petrović*: An inverse gas chromatography study of the adsorption of organics on zeolite and zeolite/iron oxyhydroxide composite at the infinite and finite surface coverage 383

Polymers

- A. Rahmatulloh, M. D. Hidayati and A. N. Fajaria*: The influence of polyvinyl alcohol concentration toward conductivity and permeability of chitosan–montmorillonite composite membrane 399

Materials

- E. N. Bulanov, A. A. Vasileva, O. N. Golitsyna, A. G. Shvareva and A. V. Knyazev*: Search for new apatite-like phases for lead utilization based on crystal structure and thermal expansion 415

Environmental

- S. S. Kretić, J. S. Štrbački and N. B. Atanacković*: Geochemistry of neutral mine drainage at sulfide deposits – Example of the „Grot“ Pb–Zn mine, south–eastern Serbia 429

Errata

- S. A. Ejaz, M. Aziz, A. Fayyaz, T. A. Wani and S. Zargar*: Correction of author’s affiliation and acknowledgement in the article. Computer-aided approach for the identification of lead molecules as the inhibitors of cholinesterase’s and monoamine oxidases: Novel target for the treatment of Alzheimer disease 441

NUMBER 4

Organic Chemistry

- P. B. Stanić, D. P. Ašanin, T. V. Soldatović and M. D. Živković*: Kinetic investigation of reactions of a 3-arylidene-2-thiohydantoin derivative with palladium(II) salts 443

Biochemistry and Bioengineering

- S. Bendjelloul, C. K. Bendeddouche, S. Bendeddouche, M. Sarri, F. Bensafiddine, N. Kambouche, L. Paquin, M. Yousfi and M. Harrat*: Co-detection of eugenol and butylated hydroxytoluene by green and selective hydrodistillation of *Heliotropium europaeum* L. using ionic liquids as additives 457

<i>A. N. Hmedat, M. C. Morejón, D. G. Rivera, N. Đ. Pantelić, L. A. Wessjohann and G. N. Kaluderović: In vitro anticancer studies of a small library of cyclic lipopeptides against the human cervix adenocarcinoma HeLa cells.....</i>	471
Theoretical Chemistry	
<i>K. F. da Costa Serra, A. Khan, R. M. Trindade Fernandes, P. A. Muniz Vazquez and A. Khan: Multivariate statistical analysis approach to investigate the thermodynamic quantities of the benign alternative fuel</i>	485
<i>M. Rashid, MD T. Athar, A. Hussain, N. M. Almadani and A. Hussain: A recent tactic for searching CDK-7 kinase inhibitor by NCI database screening</i>	505
Physical Chemistry	
<i>M. M. Budiul, M. Mateescu, G. Vlase, T. Vlase, S. Bocănici and I. A. Bradu: Thermo-analytical and spectroscopic studies on medicated jellies with perphenazine</i>	521
Electrochemistry	
<i>I. V. Goroncharovskaya, A. K. Evseev, A. K. Shabanov and S. S. Petrikov: Electrochemical analysis of antioxidant status of biological media in different sampling and storage conditions.....</i>	539
Analytical Chemistry	
<i>A. Dinçel, E. D. Gök-Topak and F. Onur: Simultaneous determination of emtricitabine and tenofovir disoproxil fumarate in pharmaceutical preparations using spectrophotometric, chemometric and chromatographic methods.....</i>	551
Environmental	
<i>P. C. Bhomick, A. Supong, A. I. Sema and D. Sinha: Defluoridation using pinecone-based activated carbon: Adsorption isotherm, kinetics, regeneration and co-ions effect investigation.....</i>	565
<i>J. Jokić Govedarica, D. Tomašević Pilipović, V. Gvoić, Đ. Kerkez, A. Leovac Maćerak, N. Slijepčević and M. Bečelić-Tomin: Cost-effective method of simultaneous removal of copper and phosphate on environmentally friendly nanomaterial.....</i>	581
<i>Errata (Printed version only)</i>	597

NUMBER 5

<i>Editorial</i>	599
<i>N. Živanović, N. Simin, M. Lesjak, D. Orčić, N. Mimica-Dukić and E. Svirčev: Comparative study between homemade and commercial hawthorn (<i>Crataegus</i> spp.) extracts regarding their phenolic profile and antioxidant activity.....</i>	603
<i>M. Jovanović, M. Vojinović Miloradov and L. Cvetičanin: Effect of silver nanoparticles in treating and healing of burn wound</i>	617
<i>V. Mišković-Stanković, A. Janković, S. Grujić, I. Matić-Bujagić, V. Radojević, M. Vukašinović-Sekulić, V. Kojić, M. Djošić and T. M. Atanacković: Diffusion models of gentamicin released in poly(vinyl alcohol)/chitosan hydrogel.....</i>	627
<i>J. K. Popović, D. J. Popović, K. J. Popović, D. Miljković, D. Lalošević, Z. Dolićanin and I. Čapo: Immunohistochemical evidences of anticancer actions of metformin with other repurposed drug combinations and correlation with hamster fibrosarcoma tumor size.....</i>	643
<i>M. Šunjević, D. Popović, S. Medić, M. Panjković and B. Gudurić: A 7-year experience in core needle biopsy of breast lesions: Correlation between imaging and hematoxylin and eosin-stained sections</i>	657

<i>D. M. Karanović, M. S. Hadnađev-Kostić, T. J. Vulić, M. M. Milanović, V. N. Rajaković-Ognjanović and R. P. Marinković-Nedućin</i> : The influence of the coprecipitation synthesis methods on photodegradation efficiency of ZnFe based photocatalysts.....	667
<i>L. Cveticanin, M. Prica and S. Vujkov</i> : Influence of the elasticity variation of the 3D printed PMMA structure on the axial tooth vibration.....	679
<i>A. Bošković, M. Sremački, S. Vještica, A. Čavić, N. Marković and B. Borovac</i> : Sulphur hexafluoride in modern medium-voltage switchgear: Advantages, hazards and environmental impact.....	693
<i>O. Doklestić, M. Vojinović Miloradov, N. Elezović, S. Kolaković and N. Simeunović</i> : Performance indicators model assessment for water system quality and supply in Montenegro.....	705
<i>N. Ž. Tošić, M. Z. Muhadinović, M. Z. Šunjević, I. P. Čosić and N. S. Stanisavljević</i> : Cadmium and lead flow analysis as a decisions support data for waste management....	715
<i>R. Folić, D. Zenunović and Z. Brujić</i> : Effects of carbonation and chloride ingress on the durability of concrete structures	729
<i>M. Šunjević, D. Nedućin, R. Božović, M. Sremački, B. Obrovski and I. Subotić</i> : Effects of urban vegetation on PM mitigation: The case of a street in Novi Sad, Serbia	743
<i>Lj. Popović, N. Sremčev, D. Purković and I. Čosić</i> : Chemical engineering in technical and technological culture.....	757
<i>I. Subotić, V. Kisić and D. Nedućin</i> : Cultural heritage in the face of climate change: From protection to decolonisation	773

NUMBER 6

<i>LJ. K. Koračak and V. D. Ajdačić</i> : Cobalt catalyzed defunctionalization reactions (Review)	785
---	-----

Biochemistry and Bioengineering

<i>M. E. Popović, M. Popović, G. Šekularac and M. Pantović Pavlović</i> : Omicron BA.2.86 Pirola nightmare: Empirical formulas and thermodynamic properties (enthalpy, entropy and Gibbs energy change) of nucleocapsid, virus particle and biosynthesis of BA.2.86 Pirola variant of SARS-CoV-2.....	807
<i>N. N. A. Razak and M. S. M. Annuar</i> : Thermochemistry of pyrolyzed rutin and its esters prepared from facile biocatalytic route	823

Theoretical Chemistry

<i>E. G. Kohan, H. Mohammadi-Manesh and F. K. Fotooh</i> : Investigation of adsorption properties of SF ₆ decomposed gases (SO ₂ and SO ₂ F ₂) on pristine and Ti-decorated SWCNT surfaces: A DFT study	841
<i>N. Aoumeur, M. Ouassaf, S. Belaidi, N. Tchouar, L. Bouragaa, I. Yamari, S. Chtita and L. Sinha</i> : Exploring the efficacy of natural compounds against SARS-CoV-2: A synergistic approach integrating molecular docking and dynamic simulation.....	857

Physical Chemistry

<i>A. Lahmidi, S. Rabii, A. Errougui, S. Chtita, M. El Kouali and M. Talbi</i> : Investigation of structural, dynamic and dielectric properties of an aqueous potassium fluoride system at various concentrations by molecular dynamics simulations.....	877
--	-----

Electrochemistry

<i>M. Lovrić</i> : Modelling a cyclic staircase voltammetry of two electron transfers coupled by a chemical reaction on a rotating disk electrode	891
---	-----

Environmental

- E. Vukićević, J. Isailović, G. Gajica, V. Antić and B. Jovančičević*: Biochar from agricultural biomass: Green material as an ecological alternative to solid fossil fuels 907
- U. S. Vural, A. Yinanc and H. C. Sevindir*: Two-stage thermocatalytic conversion of waste XLPE to diesel-like fuel..... 921

NUMBER 7–8

- E. J. Mollova, E. D. Ivanova, S. Ch. Turmanova and A. N. Dimitrov*: Microplastics – Ecosystem pollutants (Review)..... 939

Organic Chemistry

- P. Mishra, S. Nandi, A. Chatterjee, T. Nayek, S. Basak, A. Kumar Halder and A. Mukherjee*: Development of 2D and 3D QSAR models of pyrazole derivatives as acetylcholine esterase inhibitors 981

Biochemistry and Bioengineering

- V. B. Jovanović, M. R. Nikolić and S. Đ. Stojanović*: *In silico* studies of phycobilins as potential candidates for inhibitors of viral proteins associated with COVID-19..... 997

Inorganic Chemistry

- S. K. Belošević, S. B. Novaković, M. V. Rodić, V. M. Leovac, L.J. S. Vojinović-Ješić, G. A. Bogdanović and M. M. Radanović*: Introducing a novel crystal form of pyruvic acid thiosemicarbazone and its sodium salt 1011

Theoretical Chemistry

- Y. Sivrikaya, H. C. Sakarya, G. Kiliç, S. F. Ekti and M. Yandimoğlu*: New pyrene and fluorene-based π -conjugated Schiff bases: Theoretical and experimental investigation of optical properties 1025
- A. S. Salihu, W. M. N. H. Wan Salleh and T. H. Ogunwa*: Computational exploration of flavonoids from the genus *Knema* with anti-inflammatory potential 1039

Analytical Chemistry

- I. Jovančičević, M. Antić, G. Gajica and J. Schwarzbauer*: Co-pyrolysis of various plastic waste components as an environmentally sustainable source of alternative fuels 1053

Thermodynamics

- M. B. Vraneš and J. J. Panić*: The influence of conversion creatine and guanidinoacetic acid from zwitterionic to cationic form on their solubility in water – A thermodynamic study 1067

Chemical Engineering

- S. O. Meena, M. Vashishtha and Meenu*: Neem (*Azadirachta indica*) oil coated urea as a novel controlled release fertilizer: Physical and chemical analysis of structure and its nutrient release behaviour 1077

Metallurgy and Metallic Materials

- S. Rengarajan, R. Muhammed, D. Vijayan and M. Abrar*: Enhancing longevity and performance: The effects of ZrO₂ and TaC coatings on pistons in internal combustion engines 1093

Environmental

- R. Ghibate, M. B. Baaziz, A. Amechrouq, R. Taouil and O. Senhaji*: The performance of an eco-friendly adsorbent for methylene blue removal from aqueous solution: Kinetic, isotherm and thermodynamic approaches 1107

NUMBER 9

Organic Chemistry

- Đ. Glišin, O. Jovanović, G. Stojanović, A. Živković, D. Stojanović, M. Pavlović and B. Arsić*: Synthesis of methyl 3,4-anhydro-6-bromo-2-*O*-*tert*-butyldimethylsilyl-6-deoxy- α -D-allopyranoside from α -D-glucose 1123

- H. Can Sakarya, K. Görgün and C. F. Işcen*: Synthesis of novel *N*-substituted benzyl *N*-(1,3-benzothiazol-2-yl) acetamides and their *in vitro* antibacterial activities..... 1133

Biochemistry and Bioengineering

- S. Yavari, A. Hekmat and S. Sardari*: The ethanolic extract of *Eryngium billardierei* F. Delaroche restrains protein glycation in human serum albumin: An *in vitro* study 1147

Theoretical Chemistry

- S. Laib, S. Bouchekioua and R. Menacer*: A DFT study of the chemical bonding properties, aromaticity indexes and molecular docking study of some phenylureas herbicides 1165

Physical Chemistry

- P. Matić, D. Kenjeric, L. Šoher and L. Jakobek*: Study of the adsorption process between the phenolic compound catechin and the dietary fiber zymosan A: The influence of pH and concentration 1177

Electrochemistry

- J. Šćepanović, B. Zindović, D. Radonjić, M. R. Pantović Pavlović and M. M. Pavlović*: Influence of organic/inorganic inhibitors on AISI 304 (1.4301) and AISI 314 (1.4841) steels corrosion kinetics in nitric acid solution 1191

Environmental

- H. Koyuncu and A. R. Kul*: Investigation of the adsorption behaviors of thymol blue, crystal violet and rhodamine B on lichen-derived activated carbon..... 1211

- A. Amara-Rekkab*: Central composite design (CCD) and artificial neural network-based Levenberg–Marquardt algorithm (ANN–LMA) for the extraction of lanasyn black by cloud point extraction..... 1227

History of and Education in Chemistry

- B. Z. Kokić, V. D. Ajdačić, I. M. Opsenica and M. V. Zlatović*: Introductory concept for teaching chirality – Symmetry of the asymmetric..... 1241

NUMBER 10

Organic Chemistry

- F. Đurković, M. Zlatović, D. Sladić, I. Novaković, F. Bihelović and Z. Ferjančić*: *N*-2 Alkylated analogues of aza-galactofagomine as potential inhibitors of β -glucosidase 1255

Biochemistry and Bioengineering

- N. Surudžić, M. Simić, M. Crnoglavac Popović, R. El Gahwash, M. Spasojević Savković, R. Prodanović and O. Prodanović*: Immobilization of periodate-oxidized horseradish peroxidase by adsorption on sepiolite 1269

Theoretical Chemistry

- S. Aytaç*: Synthesis of and theoretical research on some azine derivatives and investigation of their antimicrobial activities 1285

- R. R. Guminiyovych, P. Y. Shapoval, M. A. Sozanskyi, V. Y. Stadnik and L. R. Deva*: Mathematical approaches to a method of semiconductor materials films synthesis type A^{II}B^{VI} for photosensitive structures used in alternative energy 1299

Physical Chemistry

- S. Rabii, A. Lahmidi, S. Chtita, M. El Kouali, M. Talbi and A. Errougui*: Molecular dynamics modelling of the structural, dynamic and dielectric properties of the LiF–ethylene carbonate energy storage system at various temperatures 1311

Electrochemistry

- M. M. Kubota, R. V. Fernandes and H. de Santana*: Electrical, optical and structural characterization of interfaces containing poly(3-alkylthiophenes) (P3ATs) and polydiphenylamine on ITO/TiO₂: Interaction between P3ATs polymeric segments and TiO₂ 1323

Analytical Chemistry

- A. Moghadasi, S. Yousefinejad, E. Soleimani, S. Taghvaei and S. Jafai*: Dispersive liquid–liquid microextraction for determining urinary muconic acid as benzene biological indicator 1337
- J. A. Teixeira, A. S. de Souza, L. D. S. M. K. de Melo and T. A. D. Colman*: Characterization of enalapril maleate: An approach using thermoanalytical, thermokinetic and spectroscopic techniques 1353

Polymers

- M. Dhiman, A. Upmanyu, D. Pal Singh and K. C. Juglan*: Ultrasonic and spectroscopic investigations of molecular interactions in binary mixture of PEG-400 and DMSO at different temperatures 1363

Metallic Materials and Metallurgy

- S. Sakthivel and K. Mohan*: Joint characteristics and process parameters optimization on friction stir welding of AA 2024-T6 and AA 5083-H111 aluminum alloys 1387

NUMBER 11

Organic Chemistry

- H. S. Aziz, I. Q. M. Al-Araj, L. R. Abdul-Raheem and A. A. Ahmed*: Synthesis and biological evaluation of some new heterocyclic derivatives from substituted thiopyrimidine 1401
- M. Nassiri Koopaei, M. Monavari, N. Vousooghi, S. Moshirabadi, M. J. Assarzadeh, M. Amini and A. Almasirad*: Synthesis and *in silico* ADMET evaluation of new thiazole and thiazolidine-4-one derivatives as non-ulcerogenic analgesic and anti-inflammatory agents 1411

Biochemistry and Bioengineering

- B. Karayavuz, S. K. Vagolu, D. Kart, T. Tønjum and O. Unsal-Tan*: Synthesis, antimicrobial and antifungal evaluation of new 4-(furan-2-ylmethyl)-6-methylpyridazin-3(2H)-ones 1423

Theoretical Chemistry

- W. López-Orozco, L. H. Mendoza-Huizar, G. A. Álvarez-Romero, J. M. Torres-Valencia and M. Sanchez-Zavala*: Chemical reactivity of alliin and its molecular interactions with the protease Mpro of SARS-CoV-2 1433
- A. Belhassan, G. Salgado, L. H. Mendoza-Huizar, H. Zaki, S. Chtita, T. Lakhlifi, M. Bouachrine, L. Gerli Candia and W. Cardona*: Identification of musk compounds as inhibitors of the main SARS-CoV-2 protease by molecular docking and molecular dynamics studies 1447

Analytical Chemistry

- A. Redžepović-Dorđević, M. Dodevska, M. Jovetić and M. Ačanski*: Fiber and micro-elements content in various types of wheat bread 1461
- M. Niculescu, M.-C. Pascariu, A. Racu and B.-O. Taranu*: Thermal behavior of polymeric nickel(II) oxalate complex obtained through nickel(II) nitrate/ethylene glycol reaction 1475

Thermodynamics

- N. Chakraborty, P. Thakur, K. C. Juglan and A. H. Syed*: Thermophysical investigation of glycol ethers in mannitol solutions at various temperatures 1489

History of and Education in Chemistry

- F. Stašević, A. Bubanja, A. Maksimović and J. Đurđević Nikolić*: Chemistry educational outcomes and standards in Serbia and Montenegro. Analysis of the teachers' attitudes and high school students' achievements 1507

NUMBER 12

- Editorial* 1525
- S. Štrbac, M. Kašanin-Grubin, J. Stajić, N. Stojić, S. Stojadinović, N. Antić and M. Pučarević*: Effects of persistent organic pollutants and mercury in protected area „Obrenovački zabran” 1527
- M. P. Aničić Urošević, D. V. Radnović, M. M. Ilić, M. D. Krmar, I. D. Kodranov, D. J. Relić and A. R. Popović*: Atmospheric deposition of potentially toxic elements over the territory of Serbia assessed by moss biomonitoring in five-year time: 2015 vs. 2020 1543
- Z. Nikolovski, A. Šajnović, G. Gajica, N. Burazer, I. Brčeski, P. Dabić and B. Jovančićević*: Maturation changes of hydrocarbons in solid parts of peloids from Serbian spas – Catalytic influence of clay minerals 1559
- T. Mutić, V. Stanković, J. Milikić, D. Bajuk-Bogdanović, K. Kalcher, A. Orner, D. Manojlović and D. Stanković*: Sustainable synthesis of samarium molybdate nanoparticles: A simple electrochemical tool for detection of environmental pollutant metal 1571
- S. J. Stojanović, M. Z. Ristić, D. R. Krajišnik, V. A. Rac and Lj. S. Damjanović-Vasilić*: Removal of pharmaceutically active substance ibuprofen from aqueous solution using TiO₂/ZSM-5 zeolite hybrid photocatalysts 1587
- A. Mihajlidi-Zelić, S. Sakan, Lj. Ignjatović, A. Popović and D. Đorđević*: Potentially toxic elements from different environmental compartments of the River Watershed in Eastern Serbia – Assessment of the human health risk 1603
- K. B. Kasalica, N. Petronijević, J. Radulović, L. Slavković Beškoski, M. B. Lješević, B. Marković and V. P. Beškoski*: Adsorption analysis of PFOA on activated carbon and ion-exchange resin: A comparative study using four isotherm models 1619
- M. Tomović, J. Grahovac, J. Dodić, M. Radojković, N. Elezović and K. Pantić*: Assessment of the concentration of toxic metals (aluminum, cadmium and manganese) in the soil and evergreen plant species at the Sastavci surface mine and its vicinity 1629
- A. M. Milošković, M. D. Radenković, N. M. Kojadinović, T. Z. Veličković, S. R. Đuretanović and V. M. Simić*: Potentially toxic elements in pikeperch (*Sander lucioperca* L.) from the Gruža reservoir: Health risk assessment related to fish consumption by the general population and fishermen 1647

<i>D. B. Prokić, M. M. Vukčević, M. M. Maletić, A. M. Kalijadis, J. N. Pejić, B. M. Babić and T. M. Đurkić: Solid-phase extraction of estrogen hormones onto chemically modified carbon cryogel</i>	1661
<i>J. Isailović, E. Vukićević, M. Antić, J. Schwarzbauer, Lj. Ignjatović, G. Gajica and V. Antić: Pyrolysis of corn stalks: the potential of using bio-oil as a fuel.....</i>	1675
Contents of Volume 89	1689
Author Index	1699