



PHYSICAL CHEMISTRY 2022

16th International Conference
on Fundamental and Applied Aspects of
Physical Chemistry

Organized by
The Society of Physical Chemists of Serbia

PRELIMINARY PROGRAM



September 26-30, 2022
Belgrade, Serbia

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Abbreviations

- PL** – Plenary Lecture
- SL** – Section Lecture
- O** – Oral Presentation
- P** – Poster Presentation

Topics

- A** – Education and History
- B** – Spectroscopy, Molecular Structure, Physical Chemistry of Plasma
- C** – Kinetics, Catalysis
- D** – Nonlinear Dynamics, Oscillatory Reactions, Chaos
- E** – Electrochemistry
- F** – Biophysical Chemistry, EPR investigations of Bio-systems
- G** – Organic Physical Chemistry
- H** – Material Science
- I** – Photochemistry, Radiation Chemistry, Photonics
- J** – Macromolecular Physical Chemistry
- K** – Environmental Protection, Forensic Sciences, Geophysical Chemistry,
Radiochemistry, Nuclear Chemistry
- L** – Phase Boundaries, Colloids, Liquid Crystals, Surface-Active Substances
- M** – Complex Compounds
- N** – Food Physical Chemistry
- O** – Pharmaceutical Physical Chemistry

PRELIMINARY DETAILED PROGRAM

Monday, September 26th

Opening Ceremony

10:00 AM - 10:15 AM

Slobodan Anić

President of the Society of Physical Chemists of Serbia

Željko Čupić

University of Belgrade, Institute of Chemistry,
Technology and Metallurgy

Chairpersons: dr Jelena Savović

10:15 AM - 10:45 AM **PL-01**

A. Clayton

Detecting intermediate states in ligand-protein interactions using edge-excitation spectroscopy

10:45 AM - 11:00 AM *Coffee Break*

Chairpersons: dr Jelena Savović

11:00 AM - 11:20 AM **B-01-SL**

M. Stoiljković, Đ. Kapuran, S. Veličković,
F. Veljković

Spectroscopic characterisation of laser-supported detonation wave (LSDW)

11:20 AM - 11:40 AM **B-02-SL**

A. Amić

Mactanamide and lariciresinol as radical scavengers and Fe²⁺ ion chelators – a DFT study

11:40 AM - 12:00 AM *Coffee Break*

12:00 AM - 01:30 PM **POSTER SESSION**

Chairpersons: dr Tihana Mudrinić, dr Dragan Ranković

Spectroscopy, Molecular Structure, Physical Chemistry of Plasma **(B)**

Electrochemistry **(E)**

Organic Physical Chemistry **(G)**

Complex Compounds **(M)**

01:30 PM - 01:45 PM **Coffee Break**

Chairpersons: dr Dejan Milenković

01:45 PM - 02:15 PM **PL-02**

Z. Marković

Advanced oxidation processes of coumarin by hydroxyl and hydroperoxyl radicals: Combination of traditional antiradical mechanisms in order to obtain less toxic products

02:15 PM - 02:45 PM **PL-03**

V. Vukojević

Extending fluorescence correlation spectroscopy to imaging: quantitative scanning-free confocal mapping of the cellular dynamics and local environment of molecules in live cells

Chairpersons: dr Dejan Milenković

02:45 PM - 03:05 PM **G-01-SL**

M. Stojanović, J. Aleksić, M. Baranac-Stojanović

Fluorescence properties of 1,2- and 1,4-dihydropyridines

Tuesday, September 27th

Chairpersons: dr Ljiljana Kolar Anić

10:00 AM - 10:30 AM **PL-04** **A. De Wit**
*Spatio-temporal dynamics of reaction fronts
in radial geometries*

10:30 AM - 10:50 AM **Coffee Break**

Chairpersons: dr Ljiljana Kolar Anić

10:50 AM - 11:10 AM **D-01-SL** **P. Kumar, D. Horváth, Á. Tóth**
*From tubular to self-propulsing chitosan
hydrogels*

11:10 AM - 11:30 AM **D-02-SL** **K. Novakovic**
*Dynamic materials for optimisation of
therapies*

11:30 AM - 11:50 AM **D-03-SL** **G. Schmitz**
*Role of radicals in the bray-liebhafsky
reactions*

11:50 AM - 12:00 AM **Coffee Break**

12:00 AM - 01:30 PM **POSTER SESSION**

Chairpersons: dr Marija Ajduković, dr Bojana Marković

Nonlinear Dynamics, Oscillatory Reactions, Chaos **(D)**
Biophysical Chemistry, EPR investigations of Bi-osystems **(F)**
Food Physical Chemistry **(N)**

01:30 PM - 01:45 PM **Coffee Break**

Chairpersons: dr Katarina Novaković

01:45 PM - 02:15 PM **PL-05** **H. Varela**
*Kinetic instabilities in electrocatalytic
systems: the effect of surface structure,
reaction mechanism, and efficiency*

- 02:15 PM - 02:45 PM **PL-06** **R. B. Faria**, E. V. Monteiro, R. T. P. Sant'Anna,
R. O. Pires
*Nonlinear behavior of chlorate based systems
- clock reactions and oscillations*
- 02:45 PM - 03:15 PM **PL-07** **I. Kiss**
*Collective synchronization of electrochemical
oscillator networks*

03:15 PM - 03:30 PM *Coffee Break*

Chairpersons: dr Ana Popović-Bjelić

- 03:30 PM - 03:50 PM **F-01-SL** **D. Drakulić**, K. Bobić, T. Milovanović, S.
Pejić, S. Stanković, S. Pajović, A. Todorović
*Impact of surfaced-modified TiO₂
nanoparticles on neurological functions and
purinergic signaling in rat brain*
- 03:50 PM - 04:10 PM **F-02-SL** **A. Todorović**, S. Pejić, K. Bobić, T.
Milovanović, S. Stanković, D. Drakulić
*Acute oral intake of surface-modified TiO₂
nanoparticles promotes biochemical and
morphological changes in rat female
reproductive system*

Wednesday, September 28th

Chairpersons: dr Predrag Banković

10:00 AM - 10:30 AM **PL-08** **S. Todorova**
Co and Ni modified Pd-Al₂O₃ catalysts for methane combustion-a short review

Chairpersons: dr Predrag Banković

10:30 AM - 10:50 AM **C-01-SL** A. Karpakala, S. Kumar, **G. Lente**, R. Szabó
A polynomial-based method to approximate kinetic curves in multistep mechanisms

10:50 AM - 11:10 AM **C-02-SL** **V. Stoyanovskii**
Application of diffuse reflectance UV-vis and luminescence spectroscopies for characterization of alumina-based catalysts

11:10 AM - 11:20 AM **Coffee Break**

Chairpersons: dr Željko Čupić

11:20 AM - 11:50 AM **PL-09** **R. Astrid**, O. Gräslund
The amyloid beta peptide: biophysical studies of interactions, structure conversions and aggregation - na tehničkim korekcijama

11:50 AM - 12:00 AM **Coffee Break**

12:00 AM - 01:30 PM **POSTER SESSION**

Chairpersons: dr Sanja Marinović, dr Leposava Pavun

Kinetics, Catalysis (C)
Pharmaceutical Physical Chemistry (O)

01:30 PM - 01:45 PM **Coffee Break**

Chairpersons: dr Stevan Maćešić

01:45 PM - 02:15 PM **PL-10**

Ž. Čupić

Importance of feedback loops and rhythmicity in neuroendocrine systems

02:15 PM - 02:30 PM

Coffee Break

Chairpersons: dr Stevan Maćešić

02:30 PM - 03:00 PM **PL-11**

G. S. Yablonsky

A brief history of time in chemistry

Chairpersons: dr Dunja Drakulić

03:00 PM - 03:20 PM **O-01-SL**

J. Martinovic, S. Ivkovic, M. Zaric Kontic, I. Gusevac Stojanovic, N. Mitrovic, I. Grkovic, J. Samardzic

Different effect of zaleplon on gabaergic signaling in the prefrontal cortex and hippocampus of male wistar rats

03:20 PM - 03:40 PM **O-02-SL**

M. B. Čolović, G. Gajski, A.-M. Domijan, M. Gerić, N. Savić, T. Parac-Vogt, D. Z. Krstić

Toxicity evaluation of promising contrast-enhancing staining agents for micro-computed tomography

Thursday, September 29th

Chairpersons: dr Olga Jakšić

10:00 AM - 10:30 AM **PL-12** **N. Vasilyeva**
*Nonlinear dynamics and deterministic chaos
in soil microbial activity*

10:30 AM - 11:00 AM **PL-13** **A.C. Silva**
*Al and Ga heterostructures on
SiO₂/SiC/Si(111)*

11:00 AM - 11:10 AM **Coffee Break**

Chairpersons: dr Stevan Blagojević

11:10 AM - 11:30 AM **I-01-SL** **Z. Jakšić**
*Freestanding or free-floating nanomembranes
in nanophotonics and nanoplasmonics*

11:30 AM - 11:50 AM **L-01-SL** **I.I. Grinvald, R.V. Kapustin**
*Formation and structure of transient phase
state near solid surface in organic systems*

11:50 AM - 12:00 AM **Coffee Break**

12:00 AM - 01:30 PM **POSTER SESSION**

Chairpersons: dr Sonja Jovanović, dr Ivan Stefanović

Education and History (A)

Environmental Protection, Forensic Sciences, Geophysical Chemistry,
Radiochemistry, Nuclear Chemistry (K)

01:30 PM - 01:45 PM **Coffee Break**

Chairpersons: dr Srđan Petrović

01:45 PM - 02:15 PM

PL-14

J. Pérez-Mercader

How oscillatory chemistry computes and what one can do with it

02:15 PM - 02:30 PM

Coffee Break

Chairpersons: dr Srđan Petrović

02:30 PM - 02:50 PM

K-01-SL

G. Kyzas

Chitosan-modified polymeric material for wastewater treatment

02:50 PM - 03:00 PM

K-02-O

D. Đukić, **A. Krstić**, I. Bracanović, A.

Kalijadis, K. Jakovljević, M. Mirković

Lemna minor as an indicator of potentially toxic elements on the Begej river surface

Friday, September 30th

Chairpersons: dr Marija Gizdavić-Nikolaidis

- 10:00 AM - 10:30 AM **PL-15** **P. Humpolíček**
Biocompatibility of conducting polymers
- 10:30 AM - 11:00 AM **PL-13** **M. Plavšić**
Membrane rheology theory of targeted release materials

11:00 AM - 11:10 AM **Coffee Break**

Chairpersons: dr Dragomir Stanisavljev

- 11:10 AM - 11:30 AM **J-01-SL** **M. Gizdavić-Nikolaidis, J. M. Pupe, A. Jose, I. N. Bujanja, L. P. Silva, D. Stanisavljev, D. Svirskis, S. Swift**
Fast and facile enhanced microwave approach for eco-friendly polymer synthesis: the example of polyaniline/chitosan composite
- 11:30 AM - 11:50 AM **J-02-SL** **Z. Žujović, Eddie Wai Chi Chan, J. Travaš-Sejdić**
Solid-state NMR of negatively charged polyanionic acid side chains grafted onto poly(3-hexylthiophene): structure and molecular dynamics

11:50 AM - 12:00 AM **Coffee Break**

12:00 AM - 01:30 PM **POSTER SESSION**

Chairpersons: Hristina Šalipur, Gordana Stevanović

Material Science **(H)**
Macromolecular Physical Chemistry **(J)**

01:30 PM - 01:45 PM **Coffee Break**

Chairpersons: dr Milovan Stojilković

01:45 PM - 02:15 PM **PL-17** **D. Peddis**
Design advanced magnetic nanocomposites

02:15 PM - 02:30 PM **Coffee Break**

Chairpersons: dr Milovan Stojilković

02:30 PM - 02:40 PM **H-01-O** D. Četković, A. Dožić, A. Despotović, K. Janjetović, N. Zogović, **Dj. Antonijević**
Effect of various radiopacifiers on selected physical properties and cytotoxicity of calcium silicate based dental cement enriched with hydroxyapatite

02:40 PM - 02:40 PM **H-02-O** A. Dožić, D. Četković, A. Despotović, K. Janjetović, N. Zogović, **Dj. Antonijević**
Surface morphology, compressive strength and biocompatibility of calcium aluminate dental cement

02:50 PM - 03:00 PM **H-03-O** **M. Pejčić**, Ž. Mravik, D. Bajuk-Bogdanović, S. Uskoković-Marković, B. Nedić Vasiljević, S. Jovanović, Z. Jovanović
The modification of surface chemistry of GO and GO/WPA nanocomposites for decolorization of methylene blue

Closing session

03:00 PM - 03:10 PM **Slobodan Anić**
President of the Society of Physical Chemists of Serbia

Željko Čupić
University of Belgrade, Institute of Chemistry,
Technology and Metallurgy

POSTERS

(A) EDUCATION AND HISTORY

- A-01-P** **T. Halaši**, S. S. Kalamković, M. Ž. Kalamković, J. M. Kalamković
Lars Onsager
- A-02-P** **T. Halaši**, S. S. Kalamković, M. Ž. Kalamković, J. M. Kalamković
Fritz Haber
- A-03-P** **T. Halaši**, S. S. Kalamković, M. Ž. Kalamković, J. M. Kalamković
Saul Dushman

(B) SPECTROSCOPY, MOLECULAR STRUCTURE, PHYSICAL CHEMISTRY OF PLASMA

- B-03-P** M. Žižić, M. Stanić, D. Bajuk Bogdanović, I. Rodić, T. Cvetić Antić, M. Živić, **J. Zakrzewska**
Production and characterisation of selenium nanoparticles by mycelium of fungus phycomyces blakesleanus
- B-04-P** M. Žižić, M. Stanić, G. Aquilanti, T. Cvetić Antić, N. Todorović, M. Živić, **J. Zakrzewska**
Selenite metabolism in the mycelium of the fungus phycomyces blakesleanus
- B-05-P** **J. Petrović**, J. Marinković, S. Živković, D. Marković, M. Momčilović
Application of LIBS technique for dental analysis
- B-06-P** **J. Petrović**, J. Savović, D. Ranković, M. Kuzmanović
Quantitative analysis of the major elements in coal using laser induced breakdown spectroscopy based on tea CO₂ laser
- B-07-P** **A. Šajić**, D. Ranković, M. Savić, J. Savović, M. Kuzmanović
Determination of nickel, cobalt, and chromium in a soda-lime glass by using LIBS based on pulsed IR laser
- B-08-P** **D. Dimić**, Ž. Milanović, M. Antonijević, A. Rakić, Z. Marković, D. Milenković, J. Dimitrić Marković
Spectroscopic and theoretical analysis of 6-hydroxydopamine, a neurotoxin
- B-09-P** **M. Marković**, D. Ranković, M. Kuzmanović, D. Milovanović, J. Savović
Profilometric analysis of pig bone damage in LIBS measurements based on tea CO₂ laser

- B-10-P** **M. G. Nikolić**, N. S. Krstić, G. M. Nikolić
Electron spin resonance study of the product of prolonged autoxidation of hydroquinone in alkaline aqueous solution
- B-11-P** **N. Nikolić**, M. Pagnacco, J. Maksimović, S. Blagojević. J. Senčanski
Molecular structure optimization and deconvolution of complex Raman spectrum bands vibrations of indigo carmine

(C) KINETICS, CATALYSIS

- C-03-P** **G. Stevanović**, N. Jović-Jovičić, A. Popović, B. Dojčinović, B. Milovanović, H. Šalipur, M. Ajduković
Kinetic and thermodynamic study of the oxidative catalytic degradation of tartrazine in the presence of Oxone[®] and cobalt supported chitosan-derived carbon-montmorillonite
- C-04-P** **B. Milovanović**, S. Marinović, R. Petrović, P. Banković, T. Mudrinić
Kinetic study of glucose oxidation reaction on carbon paste electrode modified with pillared clay-supported cobalt
- C-05-P** **G. M. Nikolić**, S. C. Živanović, A. M. Veselinović, M. G. Nikolić
The influence of pH and presence of Mg(II) ions on the kinetics of caffeic acid autoxidation in aqueous solutions
- C-06-P** **N. Jović-Jovičić**, I. Ilić, M. Ajduković, A. Milutinović-Nikolić
Kinetic and thermodynamic study of nicotine degradation by Oxone[®] activated by cobalt based catalyst
- C-07-P** **K. Milošević**, D. Lončarević, J. Dostanić
Simultaneous photodegradation of methylene blue and orange G dyes using g-C₃N₄/titanate heterojunction nanocomposite
- C-08-P** **H. Šalipur**, J. Dostanić, D. Lončarević
Photocatalytic production of hydrogen on platinum doped titanate catalyst: influence of alcohol chain length
- C-09-P** **V. Kosić**, S. Pavlović, N. Božić, B. Dojnov, G. Stevanović, Z. Knežević-Jugović, A. Milutinović-Nikolić
Immobilization of α -amylase from bacillus aralicheniformis on bentonites
- C-10-P** **S. Marinović**, T. Mudrinić, B. Milovanović, G. Stevanović, A. Milutinović-Nikolić
Effect of different cobalt loadings on the kinetic performance of cobalt-supported aluminum pillared clay towards tartrazine degradation

C-11-P S. Marinović, T. Mudrinić, M. Ajduković, N. Jović-Jovičić, P. Banković, T. Novaković

(D) NONLINEAR DYNAMICS, OSCILLATORY REACTIONS, CHAOS

D-04-P A. Joksimović, **I. N. Bubanja**, D. Stanisavljev
Gas evolution dynamics following oscillatory evolution in Bray-Liebhaftsky and Briggs-Rauscher reactions

D-05-P **N. Potkonjak**, Đ. Čokeša, M. Marković
On the influence of current interrupt method on stability of the electrochemical system - on the strange attractors

D-06-P **M. Pagnacco**, J. Maksimović, N. Nikolić, S. Blagojević, J. Senčanski
Indigo carmine determining by UV/VIS spectrometric and the kinetic method using Briggs-Rauscher oscillator: two methods comparison

D-07-P **A.M. Spasic**, V. Manojlovic, M. Jovanovic, M. Sokic
Theory of electroviscoelasticity and its possible application in quantum medicine

D-08-P **S. Maćešić**, Ž. Čupić, Lj. Kolar-Anić
Stability analysis of autocatalator in the presence of diffusion using stoichiometric network analysis

D-09-P **A. S. Stojiljković**, Ž. Čupić, S. Maćešić, A. Ivanović-Šašić, Lj. Kolar-Anić
Ultradian oscillations of corticotropin-releasing hormone (CRH) and arginine vasopressin (AVP) in modelling of hypothalamic-pituitary-adrenal axis: influence of feedback loop between CRH and cortisol

D-10-P **S. Maćešić**, K. Novaković
Simulation of the swelling of pH responsive anionic hydrogel

(E) ELECTROCHEMISTRY

E-01-P M. Pagnacco, V. Krstić, **Z. Mojović**
Hydrogen evolution reaction on Rhenium modified phosphate Mo- and phosphate W-bronze

E-02-P A. Pavićević, F. Peyrot, **Z. Mojović**, M. Mojović
Electrochemical and EPR investigation of spin probes acetoxymethoxycarbonyl- and carboxy-proxyl

E-03-P **A. Gavran**, Z. Mojović
Electrochemical behavior of activated carbon blacks

E-04-P G. Tasić, S. Mitrović, **I. Perović**, N. Zdološek, M. Seović, P. Laušević, S. Brković
Electrocatalytic activity of Co-W coatings for hydrogen production

- E-05-P** S. Mitrović, S. Brković, N. Zdolšek, G. Tasić, M. Seović, M. Čurčić, **I. Perović**
Efficient energy consumption for hydrogen production using Co-Mo based ionic activators
- E-06-P** **J. Senčanski**, N. Nikolić, S. Blagojević, I. Stojković Simatović
The examination of $ZnMnO_4$ in an aqueous solution of $ZnCl_2$ and $Mn(NO_3)_2$
- E-07-P** **D. Ž. Popović**, T. G. Ivanović, J. M. Miladinović, Z. P. Miladinović, Ferenc T. Pastor, Aleksandra Zlatić
Thermodynamic properties of the system $\{yNaCl+(1-y)Na_2HPO_4\}(aq)$ at $T = 298.15$ K by electromotive force measurements

(F) BIOPHYSICAL CHEMISTRY, EPR INVESTIGATIONS OF BIO-SYSTEMS

- F-03-P** K. Milićević, M. Lazarević, M. Momčilović, N. Todorović, B. Petković, G. Stojadinović, **Lj. Nikolić**
Naïve astrocytes react to CNS-infiltrated immune cells
- F-04-P** **Lj. Nikolić**, M. Vidović, N. Todorović, B. Petković, G. Stojadinović, Lj. Martać, J. Bogdanović Pristov
Protoplast patch-clamping using an upright microscope with a movable stage
- F-05-P** **M. B. Čolović**, G. Gajski, M. Gerić, N. Savić, T. Parac-Vogt, D. Z. Krstić
Cytotoxicity evaluation of promising staining agents for contrast-enhanced microfocus computed tomography
- F-06-P** **M. B. Čolović**, A.-M. Domijan, G. Gajski, M. Gerić, N. Savić, T. Parac-Vogt, D. Z. Krstić
Prooxidative properties of contrast agent candidates for micro-computed tomography
- F-07-P** A.-M. Domijan, G. Gajski, M. Gerić, N. Savić, T. Parac-Vogt, D. Z. Krstić, **M. B. Čolović**
In vitro toxicity evaluation of potential contrast agents for micro-computed tomography: effect on cell membrane
- F-08-P** **I. Guševac Stojanović**, J. Martinović, M. Zarić Kontić, N. Mitrović, Z. Stojanović, I. Grković, D. Drakulić
Modest protective effects of progesterone treatment in hippocampus of male rats submitted to cerebral hypoperfusion
- F-09-P** M. Pajovic, M. Aleksic, A. Zivanovic, M. Mitic, S. Ivkovic, M. Adzic, **I. Lukic**
The effects of fecal microbial transplantation from adolescent stressed mice on depressive- and anxiety-like behavior

F-10-P **J. Simonović Radosavljević**, D. Mutavdžić, D. Spasojević, M. Prokopijević, K. Radotić, A. Lj. Mitrović
FTIR analysis of normal and tension wood in Populus X Euramericana

(G) ORGANIC PHYSICAL CHEMISTRY

G-02-P **Aleksandar M. Veselinović**, Jelena V. Živković, Goran M. Nikolić

Predicting the auto-ignition temperatures of organic compounds based on monte carlo optimization method

G-03-P **J. Aleksić**, M. Stojanović, M. Baranac-Stojanović
Substituent effect at the nitrogen atom on electrocyclization reaction of polyfunctionalized 1-azatrienes

G-04-P **A. Rašović**, M. Stojanović, V. A. Blagojević
The correlation between the C=C bond lengths and its barriers to rotation: en route to quantify the push-pull effect of 2-alkylidene-4-oxothiazolidines under solvent conditions

G-05-P **A. Rašović**, M. Stojanović, V. A. Blagojević
The impact of solvent dielectric constants on the barriers to rotation around the C=C bond of 2-alkylidene-4-oxothiazolidines

(H) MATERIAL SCIENCE

H-04-P **N. Velinov**, M. Radović Vučić, M. Kostić, M. Petrović, J. Mitrović, D. Bojić, A. Bojić

The effect of different solvents in the synthesis of wood-aluminum sorbents. Dye sorption investigation

H-05-P M. Radović Vučić, **N. Velinov**, M. Kostić, J. Mitrović, M. Petrović, S. Najdanović, A. Bojić

Characterization of iron-bearing wood material for application in heterogeneous fenton-like process

H-06-P M. Kostić, **N. Velinov**, M. Radović Vučić, S. Najdanović, T. Jovanović, D. Bojić, A. Bojić

Effect of pH and equilibrium studie for the dye sorption onto layered double hydroxide

H-07-P D. Aćimović, **T. Brdarić**, B. Savić, D. Vasić Anićijević, M. Simić, J. Ciganović, M. Momčilović

Modification of graphite electrode surface by laser irradiation-role of irradiation atmosphere

H-08-P **T. Brdarić**, B. Savić, D. Aćimović, M. Simić, M. Ječmenica Dučić, Z. Vranješ, D. Vasić Anićijević
Comparative study of oxygen evolution reaction kinetics on nanocomposite metal oxide-carbon-base anodes

- H-09-P** D. Vasić Anićijević, M. Ječmenica Dučić, D. Aćimović, B. Savić, M. Simić, D. Maksin, **T. Brdarić**
Is it possible to design a water-resistant material for carbon capture?
- H-10-P** M. Vuksanović, **I.M. Stajčić**, Z. Veličković, J.D. Gržetić, F. Veljković, S. Veličković, A. Marinković
Synthesis and application of waste-pet glycolyzate plastisizer for recycled pvc production
- H-11-P** **M. Kokunešoski**, M. Pošarc-Marković, Dj. Katnić, Z. Baščarević, S. Ilić, A. Grce, A. Šaponjić
Modifying mesoporous SBA-15 by a microencapsulation method in the matrix of sodium alginate
- H-12-P** **A. Šaponjić**, M. Kokunešoski, S. Ilić, A. Radosavljević Mihajlović, T. Barudžija, B. Matović
Silicon nitride based powders obtained by carbothermal reduction and nitridation of diatomite
- H-13-P** **N. Nikolić**, A. Radosavljević, J. Spasojević, U. Stamenović, V. Vodnik, J. Tadić, Z. Kačarević-Popović
Physico-chemical characterization of Bi-layered Au-PNiPAAm/PVA hydrogel nanocomposites
- H-14-P** M. Ivanović, **A. Krstić**, S. Knežević, S. Nenadović, Lj. Kljajević, M. Mirković, M. Nenadović
Effects of high-temperature heat treatment on structural properties of alkali-activated materials
- H-15-P** **M. M. Vasić**, I. Stojković Simatović, D. M. Minić
Corrosion behavior of Fe-based amorphous and amorphous/nanocrystalline alloys in different media
- H-16-P** **M. Perić**, M. Radović, M. Mirković, Z. Milanović, D. Stanković, A. Vukadinović, Đ. Petrović, D. Janković, S. Vranješ-Đurić, I. Krstić, M. Kuraica
The analysis of 2,3-dicarboxipropane-1,1- diphosphonic acid-coated magnetite nanoparticles under an external magnetic field
- H-17-P** **M. M. Milić**, N. Jović Orsini
Structural and optical properties of crystalline TiO₂ nanoparticles – effect of heat treatment

(J) MACROMOLECULAR PHYSICAL CHEMISTRY

- J-03-P** J. V. Džunuzović, **I. S. Stefanović**, E. S. Džunuzović, S. J. Brzić, C. Marega
The influence of TiO₂ nanoparticles on viscoelastic properties and thermo-oxidative stability of polyurethane network

- J-04-P** **I. S. Stefanović**, J. V. Džunuzović, E. S. Džunuzović, C. Marega
Structure and mechanical properties of polyurethane/organoclay nanocomposites
- J-05-P** J. V. Džunuzović, **I. S. Stefanović**, E. S. Džunuzović, C. Marega
Preparation and swelling properties of polyurethane/TiO₂ nanocomposites
- J-06-P** **J. Tadić**, A. Radosavljević, N. Nikolić, J. Spasojević, Z. Kačarević-Popović
Vanillin-crosslinked chitosan as bio-functional material: effect of molecular weight on swelling, porosity and degradation properties
- J-07-P** **B. M. Marković**, T. T. Tadić, A. B. Nastasović, N. Radić, Z. M. Vuković
CO₂ capture by amine porous polymeric sorbent
- J-08-P** **B. M. Marković**, T. T. Tadić, Lj. T. Suručić, A. B. Nastasović, Z. P. Sandić, A. Onjia
Non-linear kinetic isotherms and thermodynamic behavior of As(V) onto hybrid nanocomposite
- J-09-P** **T. T. Tadić**, B. M. Marković, A. B. Nastasović, Lj. T. Suručić, A. E. Onjia
Application of macroporous nanocomposite in microextraction of aromatic amine from water
- J-10-P** **M. M. Plavšić**
Polymer-saccharide conjugates IV. Possibilities for incorporation of oscillatory response for anti-stress protection
- J-11-P** **M. M. Plavšić**
Mechanisms of polymer supramolecular structures formation for mass and heat transport control in cell systems under stress

(K) ENVIRONMENTAL PROTECTION, FORENSIC SCIENCES, GEOPHYSICAL CHEMISTRY, RADIOCHEMISTRY, NUCLEAR CHEMISTRY

- K-03-P** **A. Čučulović**, J. Stanojković, R. Čučulović, S. Nestorović, N. Radaković
Radioactivity in soil from region Donji Milanovac, np Đerdap in 2018-2020
- K-04-P** **I. Smičiklas**, M. Jović, A. Čupić, S. Dragović
Manganese removal from acidic mine effluents by thermally treated bovine bones

- K-05-P** **J. Avdalović**, N. Lugonja, T. Šoštarić, M. Lukić, J. Milić, J. Milojković, V. Conić
Recovery of copper from ore dump using bioleaching approach
- K-06-P** T. Šoštarić, J. Milojković, **J. Avdalović**, N. Lugonja, V. Adamović, A. Antanasković, Z. Lopičić
Removal efficiency of Pb(II), Zn(II) and Cu(II) in mono- and multimetal systems by alkali treated apricot shells biosorbent
- K-07-P** V. Milanković, T. Tasić, S. Mitrović, S. Brković, **I. Perović**, T. Lazarević-Pašti
Spent coffee grounds as an adsorbent for malathion and malaoxon
- K-08-P** **T. Stanišić**, M. Đolić, M. Ristić, A. Perić Grujić
Comparative analysis of Pb²⁺ separation using natural and synthetic silicate materials
- K-09-P** **M. Maletić**, A. Lazović, N. Karić, M. Vukčević, K. Trivunac, M. Ristić, A. Perić-Grujić
Fly ash modified waste cotton and cotton-polyester yarns for removal of heavy metals from water
- K-10-P** **M. Vukčević**, M. Maletić, N. Karić, B. Pejić, K. Trivunac, A. Perić Grujić
Modification of cellulose-based waste materials for removal of methylene blue from wastewater
- K-11-P** **N. Karić**, M. Vukčević, M. Maletić, M. Ristić, A. Perić-Grujić, K. Trivunac
The effect of starch modification on the dye adsorption efficiency
- K-12-P** **A. Vasić**, N. Nišić, K. Nikolić, I. Kandić, M. Stojmenović, J. Gulicovski, M. Kragović
Influence of pH of aqueous solutions on xanthates removal by using waste slag
- K-13-P** T. Tasić, V. Milanković, **M. Kokunešoski**, A. Šaponjić, A. Valenta Šobot, A. Grce, T. Lazarević-Pašti
Wood-waste-derived activated porous carbon material for pesticide removal from water
- K-14-P** **Kosana Popović**, Mirjana Antonijević Nikolić, Branka Dražić, Slađana Tanasković
The potential health risk of heavy metals in herbal tea commercially available in Šabac, Serbia
- K-15-P** K. Kokanov, T. Tasić, V. Milanković, S. Brković, N. Potkonjak, T. Lazarević-Pašti
Malathion remediation in water by biowaste-based carbon material

- K-16-P** A. Krstić, I. Bracanović, M. Vukčević, P. Batinić, D. Vasić-Anićević, Dj. Katnić, A. Kalijadis
Removal of pharmaceutical residues from aqueous solution by doped cryogels materials
- K-17-P** **G. Devic , M. Pergal, M. Pergal**
Characterization of groundwater quality in the alluvial area of Danube River near Kostolac Basin, Serbia using chemometric techniques
- K-18-P** **G. Devic , M. Pergal, M. Pergal**
Heavy Metal Contents and Assessment of Soil Contamination in Kostolac basin, Serbia
- K-19-P** **N. Sarap, M. Ničić, M. Janković**
Content of ⁹⁰Sr in monastery spring waters

(M) COMPLEX COMPOUNDS

- M-01-P** **M. Antonijević Nikolić, B. Dražić, S. Tanasković**
New macrocyclic Cu(II) complexes with leucine/isoleucine co-ligands
- M-02-P** **J. M. Živković, S. S. Zrilić, S. D. Zarić**
Comparison of NH...O interaction of coordinated ammonia and ethylenediamine
- M-03-P** M. Došić, T. Eichhorn, **D. Dimić, J. Dimitrić Marković, E. Avdović, N. Pantelić, D. Simijonović, G. N. Kaluđerović**
Novel Ru(II) complex with 1-naphthylhydrazine - synthesis, structural characterization, and interactions with transport protein
- M-04-P** S. Mišić, T. Eichhorn, F. Kolbe, **D. Dimić, J. Dimitrić Marković, T. Ruffer, D. Milenković, Jelena Đorović Jovanović, N. Pantelić, G. N. Kaluđerović**
Binuclear ruthenium(II) complex with 1-naphthylhydrazine – structural optimization, hirshfeld surface analysis, and bovine serum albumin binding studies

(N) FOOD PHYSICAL CHEMISTRY

- N-01-P** N. Lugonja, **J. Avdalović, M. Ilić, Z. Lopčić, T. Šoštarić, D. Stanković, S. Spasić**
Contemporary methods of testing human milk quality
- N-02-P** **S. Zlatanović, D. Micić, M. Đuriš, S. Ostojić, F. Pastor, M. Jovanović, S. Gorjanović**
Enhancement of nutritional, physical and structural characteristics of apple pomace flour by agglomeration with prebiotics using fluid-bed granulation
- N-03-P** **N. Đorđević, N. Todorović Vukotić, L. Korićanac, J. Žakula, S. Pejić, S. B. Pajović, V. Tešević**
Phenolic composition and cytotoxic activity of red wine

- N-04-P** S. Gorjanović, F. Pastor, D. Micić, **S.Zlatanovic**
Tomato and carrot pomace flour produced at industrial scale level by dehydration as a nutrient source in food fortification
- N-05-P** **F.Veljković**, S.Veličković, N.Manić, I.Stajčić, B.Janković
TG-DTG analysis of fruit-based waste pyrolysis: a case study of goji berry mesocarp
- N-06-P** **Đ. Nakarada**, D. Milosavljević, J. Milivojević, J. Dragišić Maksimović, M. Mojović
Antiradical activity of new strawberry cultivar extracts incorporated into liposomes – an EPR study
- N-07-P** A. Gavran, A. Jevremović, D. Bajuk-Bogdanović, M. Milojević-Rakić, M. Mojović, **A. Pavičević**
Microwave assisted isolation of pectin from red orange peels using green solvents

(O) PHARMACEUTICAL PHYSICAL CHEMISTRY

- O-03-P** **M. Zarić Kontić**, M. Dragić, J. Martinović, K. Mihajlović, N. Mitrović, I. Guševac Stojanović, I. Grković
Prolonged alprazolam treatment differentially modulates the protein expression of excitatory amino acid transporters 1 and 2 both in vivo and in vitro
- O-04-P** **M. Popović Nikolić**, M. Čakar, G. Popović
The protolytic equilibria of raloxifene
- O-05-P** **M. Popović Nikolić**, J. Mudrić, G. Popović
The determination of the ionization profile of ceftazidime
- O-06-P** **Lj. Nikolić**, D. Savić, J. Korać Jačić, B. Petković, G. Stojadinović, Lj. Martać, J. Bogdanović Pristov
membrane currents of C6 cells in pharmacological investigation
- O-07-P** **M. Radović**, M. Mirković, M. Perić, A. Vukadinović, D. Stanković, Z. Milanović, Đ. Petrović, D. Janković and S. Vranješ-Đurić
¹⁷⁷Lu-phosphate and phosphonate magnetic nanoparticles as potentialtheranostic nanoagents
- O-08-P** **Z. Milanović**, M. Radović, D. Stanković, M. Perić, A. Vukadinović, Đ. Petrović, D. Janković, S. Vranješ ĐURIĆ, M. Mirković
The electrochemical characterization, radiolabeling, and biodistribution in tumor-bearing mice of ¹⁷⁷Lu-doxycycline
- O-09-P** **M. Čarapić**, M. Petković, B. Marković, M. Popović Nikolić, D. Agbaba, K. Nikolic
Characterization of unknown impurity of ziprasidone with NMR spectroscopy

- O-10-P** A. Zivanovic, M. Mitic, E. Glavonic, I. Lukic, M. Adzic, **S. Ivkovic**
Inhibition of kappa opioid receptor (KOR) augments ketamine anti-depressive properties in the mouse model of depression
- O-11-P** **A. M. Bondžić**, D. Jovanović
Quenching of bovine serum albumin fluorescence by methionine coated silver nanoparticles: insight in the mechanism of interaction
- O-12-P** **A. M. Bondžić**, D. Jovanović, Z. Džambaski, A. Filipović, B. P. Bondžić
New derivatives of 2-phenyl-1,2,3,4-tetrahydroisoquinoline as dual inhibitors of cholinergic enzymes
- O-13-P** **A.M. Bondžić**, N. D. Savić, T.N. Parac-Vogt
Zr(IV)-substituted Keggin type polyoxotungstates as acetylcholinesterase inhibitors
- O-14-P** **D. Spasojević**, D. Mutavdžić, J. Simonović Radosavljević, A. Lj. Mitrović, D. Đikanović, K. Radotić
Kinetic release study of synthetic lignin (DHP) from calcium alginate beads
- O-15-P** **M. Ranković**, A. Janošević Ležaić, A. Jevremović, A. Arsenijević, V. Dobričić, B. Nedić Vasiljević, D. Bajuk-Bogdanović, M. Milojević-Rakić
Zeolite carriers for the acridine derivatives delivery
- O-16-P** D. Mašojević, V. Vodnik, J. Spasojević, T. Barudžija, M. Otoničar, S. Davidović, **U. Stamenović**
Antibacterial activity of copper/polypyrrole nanocomposite