

# 100 Years Department of Analytical Chemistry

3-4 October 2024  
Sofia, Bulgaria

Faculty of Chemistry and Pharmacy  
Sofia University “St. Kliment Ohridski”



# Official Ceremony

Celebration | 14:00 | 3rd October | AULA, Rectorat, Sofia University "St. Kliment Ohridski"

## Scientific Session

Registration | 9:30 | 4th October | 130 Hall, Faculty of Chemistry and Pharmacy

Lectures | 10:00 | 4th October | 130 Hall, Faculty of Chemistry and Pharmacy

### Session 1 | Chair prof. Irina Karadjova

**10:00-10:20 | Brycht, M.** | Surface pretreatment as a significant factor influencing the electrochemical performance of boron-doped diamond electrodes

**10:20-10:40 | Burnat, B.** | From sol-gel to sensor: Advancements in carbon ceramic electrodes

**10:40-11:00 | Gyurcsik, B.** | Circular dichroism spectroscopic studies of metal complexes

**11:00-11:30 | Coffee break**

### Session 2 | Chair prof. Stefan Tsakovski

**11:30-11:50 | Kudlak, B.** | Are we ready to change the paradigms in analytical and bioanalytical chemistry?

**11:50-12:10 | Stafilov, T.** | Studies on environmental pollution with potentially toxic elements in North Macedonia

**12:10-12.30 | Kolev, S.** | Determination of Au(III) by sequential injection analysis with online separation and preconcentration using micro polymer inclusion breads

**12:30-13:30 | Lunch Break**

### Session 3 | Chair assoc. prof. Anife Ahmedova

**13:30-13:50 | Slaveykova, V.** | When metalomics meets metabolomics: Unravelling the impact of mercury compounds on freshwater phytoplankton

**13:50-14:10 | Bobev, S.** | Novel Zintl phases with group 15 elements and late d-metals

**14:10-14.30 | Ugrinov, A.** | X-ray diffraction analysis of metal-organic frameworks for enzyme biomineralization

**14:30-14:50 | Pavlović, G.** | 20 years of Bulgarian-Croatian scientific collaboration through the eyes of a crystallographer

## Poster Session

Posters | 15:00 | 4th October | Lobby in front of 210 Hall, Faculty of Chemistry and Pharmacy

**1 | Ahmedova, A.** | Anticancer activity of metal-templated Schiff base complexes and their propensity to supramolecular network formation

**2 | Aleksova, M.** | Risk analysis of Sofia city drinking water for pharmaceutical residues

**3 | Amideina, A.** | Residual deviations analysis – A powerful calibration linearity criterion.

**4 | Balkanska, R.** | A new approach for identification of the botanical origin of Bulgarian honeydew and monofloral honeys

**5 | Belovezhdova, I.** | Development of solid-phase extraction method for sample preparation and GC-MS/MS analysis of PAHs in waste samples

**6 | Bogdanova, M.** | Chemical and biotechnological evaluation of Ravda WWTP adaptiveness to handle the increased load during the summer tourist season

**7 | Borisova, N.** | Determination of arsenic in soil samples

- 8 | **Dakova, I.** | Ionic liquid modified polymer gel for arsenic speciation
- 9 | **Detcheva, A.** | Biosorption of Cu(II) ions on a waste material of plant origin using factorial design approach
- 10 | **Dimitrova, D.** | An archaeometric study of a metal overlaid bronze diadem by inorganic mass spectrometry
- 11 | **Ganchev, I.** | Kinetic analysis of growth of *Lactobacillus delbrueckii* subsp. *bulgaricus* WDCM 00102 in algae-based medium
- 12 | **Kovacheva, A.** | Trace metal transfer in the system soil solution-vegetation of the industrial areas of West Rhodope Mountain, Bulgaria
- 13 | **Kovacheva, P.** | On the use of gamma irradiation for decomposition of some toxic and carcinogenic organic compounds in waters
- 14 | **Kukeva, R.** | In situ EPR investigation of degradation of propylene carbonate-based electrolytes for sodium-ion batteries
- 15 | **Lesigyerski, D.** | Chemical and rock-magnetic analyses applied to assess the provenance and technology of archaeological ceramics: Comparison between specimens dated to the end of the Chalcolithic from two regions in Bulgaria
- 16 | **Lyubomirova, V.** | First archaeological finds in Nedelino, Rhodope mountains – determination of the chemical composition
- 17 | **Mihaylova, K.** | Photocatalytic degradation of tartrazine by sol-gel derived TiO<sub>2</sub>/ZnO nanopowders
- 18 | **Mihaylova, V.** | Archaeometric studies of a set of iron age tiles using ICP-MS and p-XRF
- 19 | **Mintcheva, N.** | Removal of organic pollutants from oilfield produced water
- 20 | **Nedzhib, A.** | Pt(II) coordination to oximes improves their reactivation efficacy against acetylcholinesterase inhibited by nerve agent surrogates – in vitro study
- 21 | **Pantcheva, I.** | Powder X-ray diffraction as a powerful tool in discriminating between divalent metal complexes of sodium monensin
- 22 | **Petkov, N.** | Mössbauer spectroscopy study for revealing the structure of ferric ionophore complexes
- 23 | **Petrova, S.** | Sol-gel synthesis of Fe<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub>/PVP nanopowders for photocatalytic degradation of organic pollutants
- 24 | **Sezanova, K.** | Solubility of hydroxiapatite and its derivate with 4-methacryloxyethyl trimellitic anhydride in water and lactic acid
- 25 | **Simeonova, G.** | Stereoselective radiolabeling of a bifunctional tetrazine with [<sup>18</sup>F] FDG
- 26 | **Slavova, S.** | Ab initio study of the hydrothermal amino acids formation
- 27 | **Stoyanova, N.** | Optical properties of CAID and its Cu(II) and Zn(II) complexes
- 28 | **Stoykova, S.** | General unknown toxicological screening in the case of NPS poisoning
- 29 | **Tsekova, D.** | Spectroscopic and theoretical studies on the interactions of hematoporphyrin IX with Zn<sup>2+</sup> in alkaline-aqueous solutions
- 30 | **Tzvetkova, C.** | A field test for rhenium determination in raw vegetation by freezing with liquid nitrogen
- 31 | **Varbanova, E.** | Statistical evaluation of elements concentration of linden blossom samples collected from Plovdiv, Bulgaria
- 32 | **Vassileva, P.** | Potential of black cumin seed oil press cake for removal of toluidine blue from aqueous solutions
- 33 | **Velcheva, V.** | Studies on the behavior in aqueous solutions of the bis-complex of Pt(IV) with the tridentate ligand all-cis-2,4,6-triaminocyclohexane-1,3,5-triol
- 34 | **Yotova, G.** | Pchelina dam impact on the Struma river quality

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