



United Nations  
Educational, Scientific and  
Cultural Organization



• International Year  
• of the Periodic Table  
• of Chemical Elements



# 13<sup>th</sup> Students' Congress of SCTM

## –Program–

19–21 September, 2019 | Institute of Chemistry  
Skopje,  
Republic of N. Macedonia

*recognized by:*



**EuChemS**

European Chemical Society

Prof. Dr. Miha Bukleski  
*Scientific Committee, President*

MSc Katarina Josifovska  
*Organizing Committee, President*

Prof. Dr. Zoran Zdravkovski  
*SCTM, President*

| Registration desk (I floor) |                                                                                                                                                                                                                          |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8:15                        | Registration + coffee                                                                                                                                                                                                    |
| Lecture room 124 (I floor)  |                                                                                                                                                                                                                          |
| 9:30                        | Opening Ceremony                                                                                                                                                                                                         |
| Chairperson                 | Katarina Josifovska                                                                                                                                                                                                      |
| 10:00                       | <b>P1 - Dr. Kai S. Exner</b> , University of Sofia, Sofia, Bulgaria<br><b>Recent model development for the investigation of drug-delivery systems as well as solid-state electrodes in electrocatalysis or batteries</b> |
| Lecture room 124 (I floor)  |                                                                                                                                                                                                                          |
| Chairperson                 | Vladimir Ivanovski                                                                                                                                                                                                       |
| 11:00                       | <b>Elena Ruxandra Radu</b> - In-depth thermal and mechanical characterization of liquid rubber composites intended for medical applications                                                                              |
| 11:15                       | <b>Iva Dimitrievska</b> - Screen printed electrodes based on polymer/CNT and polymer/G nanocomposite for advanced gas sensing application                                                                                |
| 11:30                       | <b>Kosta Najkov</b> - Fast and accurate determination of important biomarkers in human blood serum                                                                                                                       |
| 11:45                       | <b>Daniela Spasova</b> - Application of Multi Wall Carbon nano tubes as a drug carriers                                                                                                                                  |
| 12:00                       | Coffee break (Library I floor)                                                                                                                                                                                           |
| Chairperson                 | Jasmina Petreska-Stanoeva                                                                                                                                                                                                |
| 12:30                       | <b>Zorica Lelova</b> - Optimization and validation of capillary electrophoresis method for analysis of small-anions in red wines                                                                                         |
| 12:45                       | <b>Sanja Durakova</b> - Application of HPLC-DAD for phenolic evaluation of red wines during maceration                                                                                                                   |
| 13:00                       | <b>Viktor Damjanovski</b> - Using anthocyanin profiles for authentication of various red juices from local markets                                                                                                       |
| 13:15                       | <b>Elena Balshikevska</b> - Phenolic compounds of Aronia Melanocarpa from Macedonia: LC/DAD/ESI/MSn profile and content                                                                                                  |
| 13:30                       | <b>Desislava Gerginova</b> - How to identify authentic honey using NMR spectroscopy                                                                                                                                      |
| 13:45                       | <b>Martina Bogojovska</b> - Characterization of phenolic compounds in honey by solid-phase extraction and HPLC-DAD-MSn                                                                                                   |

| Library (I floor)                            |                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14:00                                        | Lunch break                                                                                                                                                                                                                                                                                       |
| Lecture room 124 ( I floor)                  |                                                                                                                                                                                                                                                                                                   |
| <i>Chairperson Slobotka Aleksovska</i>       |                                                                                                                                                                                                                                                                                                   |
| 15:00                                        | <b>P2 - Dr. Tina Skalar</b> , Faculty of Chemistry and Chemical Technology, Ljubljana, Slovenia<br><b>Advanced microscopy techniques in material investigation</b>                                                                                                                                |
| Lecture room 124 (I floor)                   | Lecture room 125 (I floor)                                                                                                                                                                                                                                                                        |
| <i>Chairperson Sandra Dimitrovska-Lazova</i> | <i>Darko Dimitrovski</i>                                                                                                                                                                                                                                                                          |
| 16:00                                        | <b>Vasil Makrievski</b> - Synthesis, structural characteristics and thin film preparation of four potential light-harvesting hybrid perovskites<br><br><b>Ajra Sinanova</b> - Sensor, mechanical and electrical properties of graphene/MWCNTs polymer nanocomposites                              |
| 16:15                                        | <b>Nina Chupona</b> - Influence of bismuth doping on the electrocatalytic properties of the $\text{PrMn}_{0.5}\text{Co}_{0.5}\text{O}_3$ perovskite<br><br><b>Ana Trajcheva</b> - Synthesis of graphene nanoribbons/polymer adsorbents for detecting toxic gases                                  |
| 16:30                                        | <b>Jane Neshovski</b> - Activation and modification of multi-wall carbon nanotubes - MWCNTS for their use in orbiting composite materials: MWCNTs-perovskites<br><br><b>Tamara Georgievska</b> - Modification of Graphene and hybrid Graphene/MWCNT nanostructures for drug delivery applications |
| 16:45                                        | <b>Sofija Popovska</b> - Preparation of composite material of organic-inorganic perovskite with multi-wall carbon nanotubes: MWCNT- $\text{CH}_3\text{NH}_2\text{PbI}_3$<br><br><b>Marija Prosheva</b> - Graphen/carbon nanotube reinforced polymer composites as a UV protective coating         |
| 17:00                                        | <b>Vasil Makrievski</b> - Vibrational spectroscopy studies of hybrid perovskites, $(\text{CH}_3\text{NH}_2)\text{B}_{0.5}\text{Ag}_{0.5}\text{I}_3$ and $\text{CH}(\text{NH}_2)_2\text{B}_{0.5}\text{Ag}_{0.5}\text{I}_3$ (B = Sb or Bi)                                                          |

## Registration desk (I floor)

8:15

Registration + coffee

## Lecture Room 124 (I floor)

Chairperson *Jane Bogdanov*

9:00

**P3 - Dr. Antonio M. Rodriguez Garcia**, Universidad de Castilla-La Mancha, Ciudad Real, Spain  
**Computational Organic Chemistry. From molecules to nanomaterials**

## Lecture room 124 (I floor)

Chairperson *Arianit Reka*

10:00

**Alexandru Anisie** - Chitosan nanofibers modified with formylphenylboronic acid. Preparation and characterization

10:15

**Marija Šuljagić** - Mechanochemically synthesized  $\text{CoFe}_2\text{O}_4$  and  $\text{CoFe}_2\text{O}_4$ /starch nanoparticles as efficient adsorbents for hexavalent chromium removal

10:30

**Tajana Kostadinova** - Silver-dropped reduced graphene oxide-based bimetallic nanohybrids as promising gas sensors

10:45

**Andrei Iulian Slabu** - Catalytic Activity of Mixed Oxides Derived from LDH in the Synthesis of Methylpyrazine: a Comparative Study

11:00

## Coffee break (Library I floor)

## Lecture room 124 (I floor) Lecture room 125 (I floor)

Chairperson *Vojo Jovanov*

11:30

**Robert Andrei Țincu** - Metal containing ionic liquids as catalyst for synthesis of polyester polyols from PET wastes

11:45

**Stojan Stojchevski** - Innovative methods and technology usage in natural cosmetics formulation

12:00

**Bianca Iustina Andreica** - Chitosan based copolymers with enhanced solubility properties

12:15

**Bejhan Bilali** - Functionalization of recrystallized biosorbents as strategy for water removing in biofuel

Chairperson *Jane Bogdanov*

**Monika Angelkoska** - Production of fructo-oligosaccharides by enzymatic hydrolysis of inulin with free and immobilized inulinase

**Sara Grbevsk** - Effect of the molecular weight of chitosan on its edible films' properties

**Njomza Buxhaku** - Characterization of porous materials obtained under hydrothermal procedure from clayey diatomite and  $\text{Ca}(\text{OH})_2$

**Ivana Tasevska** - Intelligent packaging for monitoring pH variations in food

Chairperson *Vojo Jovanov*

**Stojan Stojchevski -**

12:30      Developing natural  
cosmetics by replacement of  
conventional preservatives  
and thickeners

**Library (I floor)**

**13:00**

**Lunch break**

**Lecture room 124 (I floor)**

Chairperson *Miha Bukleski*

14:00      **P4 - Dr. Aleksandar Višnjevac**, Institut Ruđer Bošković,  
Zagreb, Croatia  
**Biomimetic modelling of metalloenzyme active sites by means  
of supramolecular bioinorganic edifices**

**Lecture room 124 (I floor)**

Chairperson *Nataša Ristovska*

15:00      **Monika Angelkoska** - Production of fructo-oligosaccharides by  
enzymatic hydrolysis of inulin with free and immobilized  
inulinase

15:15      **Sandra Snežana Jovičić Milić** - Synthesis and characterization  
of new palladium(II) complex with 2-amino-5-methyl-4-  
phenylthiazole

15:30      **Pece Sherovski** - First derivative spectroscopy ratio method of  
Bradford assay for determination of urine proteins

15:45      **Ana S Stanković** - Cytotoxicity of copper(II) complexes with S-  
isoalkyl derivatives of thiosalicylic acid on tumor cells of human  
and murine lung carcinoma IN VITRO

16:00      **Verica Ristevska** - Urinary proteins as prognostic markers to  
monitor nephropathy in primary and secondary hypertension  
patients

16:15      **Iva Janeva** - SDS-PAGE analysis for cerebrospinal fluid  
proteins

**Library (I floor)**

**Networking**

**16:30**

**European Young Chemists' Network (EYCN) Symposium  
Soft Skills**

**19:30**

**Congress Party**

|                                    |                                                                                                                                                                                   |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Registration desk (I floor)</b> |                                                                                                                                                                                   |
| 8:15                               | Registration + coffee                                                                                                                                                             |
| <b>Lecture room 124 (I floor)</b>  |                                                                                                                                                                                   |
| <i>Chairperson Marina Stefova</i>  |                                                                                                                                                                                   |
| 9:00                               | <b>I - Peter Bolgar</b> , University of Cambridge, Cambridge, UK<br><b>Molecular replication using covalent base pairs</b>                                                        |
| <b>Lecture room 124 (I floor)</b>  |                                                                                                                                                                                   |
| <i>Chairperson Pece Šerovski</i>   |                                                                                                                                                                                   |
| 9:45                               | <b>Ivana A Boskov</b> - The effect of solvent polarity on the mineral composition of wheatgrass ( <i>Triticum aestivum</i> L.)                                                    |
| 10:00                              | <b>Lena Talevska</b> - Forced degradation study of venlafaxine hydrochloride using HPLC/DAD                                                                                       |
| 10:15                              | <b>Mirjana Bogdanoska</b> - Optimization of microwave-assisted digestion procedure for determination of target elemental impurities in pholcodine monohydrate by means of ICP-OES |
| 10:30                              | <b>Elena Petrovska</b> - RP-HPLC-DAD method for sildenafil, vardenafil and tadalafil determination in pharmaceutical dosage forms and dietary supplements                         |
| 10:45                              | <b>Tanja Bakovska Stoimenova</b> - Development and validation of fast, simple, cost-effective and robust RP-HPLC methods for lisinopril, enalapril and perindopril determination  |
| 11:00                              | <b>Sandu Cibotaru</b> - PEGylated phenothiazine derivatives as water soluble precursors for biomaterials                                                                          |
| 11:30                              | <b>Closing Ceremony (Awards, Certificates)</b>                                                                                                                                    |

*Designed by:*  
*Katarina Josifovska*

*Skopje, 2019*

