

PROGRAMME

08/09/2021

14:00 – 15:00 **Conference registration**

15:00 – 15:30 **Poster installation, coffee time**

15:30 – 17:15 **POSTER SESSION A**

17:15 – 19:00 **POSTER SESSION B**

09/09/2021

MORNING SESSION 1

Chair: Vessela Tsakova

09:00 – 09:15 **OPENING**

09:15 – 09:45 **H. Popov, N. Tonkov, P. Georgiev**

Registration and mapping of remains of ancient architectural complexes using an electroresistivity geophysical method

09:45 – 10:15 **D. Yancheva, S. Tapanov, P. Penkova, B. Stamboliyska, E. Velcheva, S. Stoyanov, M. Guncheva, D. Fisher, A. Lederer**

X-Ray fluorescence and vibrational spectroscopy study on the pigments used in the wall paintings of Chapel "Assumption of St John of Rila" in the main church of Rila Monastery, Bulgaria

10:15 – 10:45 **S. Belishki, S. Varadinova-Papadaki, N. Haralampiev, E. Stoyanova-Djambazova, A. Vatov, G. Avdeev, D. Yancheva**

Technological study of a Portrait of Princess Maria Louisa by Ivan Mrkvicka – Initial Results of the Analyses

10:45 – 11:15 **COFFEE BREAK**

MORNING SESSION 2

Chair: Tony Spassov

11:15 – 11:45 **T. Babeva, K. Lazarova, D. Zgureva, M. Vasileva and S. Boycheva**

Fly ash zeolites as active media for optical sensing

11:45 – 12:15 **J. Heupel, N. Felgen, A. Schmidt, F. Schnabel, J.P. Reithmaier, C. Popov**

Diamond photonic structures with integrated color centers

12:15 – 12:45 **T. Todorova, P. Petrova, T. Petrova, B. Barbov, G. Karcheva, S. Todorova, Yu. Kalvachev**
Catalytic oxidation of CO and benzene over noble metals loaded on hierarchical zeolites

13:00 – 14:30 **LUNCH BREAK**

AFTERNOON SESSION

Chair: Hristo Popov

14:30 – 14:50 **K. Dimitrov, N. Prahov**
New data on the historical development of the port of Apollonia Pontica - Sozopol

14:50 – 15:10 **N. Kecheva, K. Chukalev**
Archaeological Field Surveys for Data Recording in Transport and Pipeline Infrastructure Projects in Bulgaria during the Period 2018-2020

15:10 – 15:30 **M. Dotkova**
The Importance of the Expertise for Authenticity in the Work of the State Authorities

15:30 – 15:50 **V. Fol, R. Preshlenova, R. Popova**
Presentation of the Cultural Heritage in a Digital and Real Environment. The Experience of an Exhibition

15:50 – 16:20 **COFFEE BREAK**

Chair: Iglia Mishkova

16:20 – 16:40 **R. Karamanova - Zlatkova**
Re-conservation of Ancient Floor Mosaic from "Ayazmoto" (Stara Zagora)

16:40 – 17:00 **K. Kitanov, A. Andreeva, S. Zypkova**
Conservation of Stone Monuments from the Collection of NAIM

17:00 – 17:20 **I. B. Nikolov, G. G. Baykushev**
Technique, technology and craftsmanship of orthodox icons, dated from 1854, owned by the Holy Metropolis of Nevrokop, Leshko village, Blagoevgrad region

17:20 – 17:40 **P. Penkova, M. Dinu, L. Ratoiu, A. Chelmus, L. Angheluta, V. Atanassova**
Preliminary Study of the Pectoral from Golyama Kosmatka Tumulus

17:40 – 18:00 **R. Manova, B. Rangelov, G. Avdeev**
Materials, techniques and technology, used to decorate the Thracian cult temple Starosel

CONFERENCE DINNER

10/09/2021

MORNING SESSION 1

Chair: Yuri Kalvachev

- 08:30 – 09:00 **M. Dangalov, Y. Mitrev, N. Toncheva-Moncheva, Ch. Novakov, N. G. Vassilev**
In situ irradiation NMR spectroscopy in the design of new functional materials (LED-NMR)
- 09:00 – 09:20 **K. Kamenova, V. Kortenova, G. Grancharov, P. Petrov**
Crosslinked redox-responsive mixed micelles for enhanced intracellular drug release
- 09:20 – 09:40 **K. Kamburova, N. Boshkova, N. Boshkov, Ts. Radeva**
Polymeric modified metal oxide nanoparticles and nanocontainers with inhibitor for application in composite coatings for corrosion protection of low carbon steel
- 09:40 – 10:00 **E.Vassileva, L. Mihaylov, T. Boyadjieva, V. Koleva, R. Stoyanova, T.Spassov**
Porous Sn obtained by selective electrochemical dissolution of melt-spun Zn₇₀Sn₃₀ alloys with lithium and sodium storage properties
- 10:00 – 10:20 **D. Paskalev, E. Lefterova, E. Slavcheva**
Powder impedance spectroscopy – a new approach to physicochemical characterization of solid materials

MORNING SESSION 2

Chair: Pavletta Shestakova

- 10:40 – 11:00 **F. Hodzhaoglu**
Introduction to the new laboratory for sample preparation
- 11:00 – 11:20 **E. Mladenova and Ts. Voyslavov**
Atomic Absorption Spectrometry – a Good Known Method for Elemental Analysis
- 11:20 – 11:40 **D. Gerginova, S. Simova**
NMR metabolomics applied to the oldest alcoholic beverage (honey wine) – chemical profile of different types of mead

11:40 – 12:00 **CLOSING CEREMONY**

DEPARTURE

POSTER SESSION A

- A 01** *R. Manova, P. Penkova*
Laboratory research of the pigment cinnabar from the decoration of immovable and movable cultural values, for presentation in the exhibition "The royal color of cinnabar in the Thracian and Roman culture in the Bulgarian lands"
- A 02** *I. B. Nikolov*
Paintings from the collection of the National Ethnographic Museum. (period XX - XXI century)
- A 03** *D. Kyuranova*
Analysis of textiles, part of Bulgarian national costumes, end of 19th c. - beginning of the 20th c.
- A 04** *M. Argirova, S. Tapanov, S. Atanasova – Vladimirova, B. Stamboliyska, E. Velcheva, S. Stoyanov, M. Guncheva, D. Fisher, A Ledere*
Multianalytical Study on Wall Paintings of the Catholicon "The Nativity of the Virgin", Rila Monastery, Bulgaria
- A 05** *D. Yancheva, R. Manova, M. Madgarov, G. Avdeev, L. Aleksandrov, R. Kukeva, R. Stoyanova*
Analytical study of the varnish coating in fragments from the mural decoration of Roman family tomb, at Hisarya/ Diocletianopolis
- A 06** *V. Lyubomirova*
Microelements' composition of Chalcolithic Gold from Varna – initial provenance study
- A 07** *V. Georgiev, I. Karadjova*
Matrix interferences in the ICP-MS measurement of various matrices
- A 08** *V. Chakarova, M. Monev*
X-ray fluorescence (EDXRF) measuring instrument for coating thickness measurements and material analysis
- A 09** *R. Andreeva, D. Stoychev*
Effect of incorporation of phosphate layers on the corrosion behavior of Al-1050 protected by ceria conversion coatings
- A 10** *Ch. Girginov, S. Kozhukharov, P. Petkov*
Electrochemical methods for determining the corrosion of aluminum and its alloys
- A 11** *M. Arnaudova, R. Rashkov*
Studies on the corrosion behavior of alloys and composite coatings based of Ni with W, Mo and TiO_x
- A 12** *M. Peshova, V. Bachvarov*
Application of the method of Electrochemical Impedance Spectroscopy (EIS) to study the corrosion properties of Zn / conversion film systems in model corrosion media - 1N Na₂SO₄ and 5% NaCl

- A 13** *S. Atanasova–Vladimirova, A. Alexandrova-Watanabe, I. Piroeva*
Investigation of the structural and morphological properties of blood clots in patients with type 2 diabetes mellitus, using a scanning electron microscope
- A 14** *B. Abrashev, V. Terziev, D. Paskalev, E. Lefterova, K. Petrov*
Electrochemical characterizations of bimetallic catalyst for gas diffusion electrodes (GDEs)
- A 15** *A. Nakova, M. Ilieva, C. Czibula, C. Teichert, V. Tsakova*
Pd / PEDOT nanocatalysts for formic acid
- A 16** *H. Kolev, T. Todorova, T. Petrova, Y. Kalvachev*
XPS study of synthesized mordenite modified with monometallic Cu or Pt catalysts
- A 17** *K. Lazarova, S. Bozhilova, S. Ivanova, D. Christova and T. Babeva*
Room temperature acetone detection based on poly(vinyl alcohol)-g-poly(methyl acrylate): thin films fabrication and sensing properties
- A 18** *N. Minev, K. Buchkov, H. Dikov, I. Avramova, D. Dimitrov and V. Marinova*
PtSe₂ layers synthesized by thermally assisted conversion method: characterizations for optoelectronic and sensing applications
- A 19** *B. Napoleonov, D. Petrova, V. Marinova, B. Blagoev, V. Strijkova and D.Z. Dimitrov*
Transparent Conducting Oxide Materials and Structures for Flexible Electronics
- A 20** *N. Mirchev, G. Avdeev*
Morphology of copper particles obtained by chemical precipitation in water

POSTER SESSION B

- B 01** *I. Dionisieva, H. Dikov, D. Kovacheva, D. Dimitrov and V. Marinova*
Synthesis and study of 2D materials with improved environmental and chemical stability
- B 02** *J. Mickovski, D. Petrova, V. Marinova and D.Z. Dimitrov*
Synthesis and Research of 3D and 2D Topological Insulators
- B 03** *M. Tavlinova-Kirilova, M. Marinova, M. Kamenova-Nacheva, K. Kostova, V. Dimitrov*
Synthesis of chiral, non-racemic amino acid derivatives and determination of their optical purity using a polarimeter
- B 04** *M. Kamenova-Nacheva, S. Taneva, Sv. Momchilova*
Content of Tocopherols in Oils from gamma-Irradiated Almonds and Walnuts determined by High-Performance Liquid Chromatography (HPLC)
- B 05** *M. Dangalov, M. Ravutsov, P. Petrov and N. G. Vassilev*
Light-induced Suzuki-Miyaura Reaction Catalyzed by Pd-NHC Complexes

- B 06** *N. Lumov, S. Stoyanov, K. Anichina, D. Yancheva*
Synthesis, spectral and structural studies on some thioacetyl piperazine derivatives of 5(6)-nitro-1H-benzimidazol-2-thiol and their anionic products
- B 07** *N. Anastassova, K. Radev, I. Georgieva, R. Tzoneva, D. Yancheva*
Synthesis of new triazolo derivatives of the N,N'-disubstituted benzimidazole-2-thione and evaluation of their antitumor potential and radical-scavenging properties
- B 08** *Y. Mitrev, D. Gerginova, S. Simova*
¹³C-based NMR quantification of sugars – the battle rages on
- B 09** *K. Aleksieva, R. Mladenova*
Application of EPR spectroscopy for analysis of irradiated bee products. Comparison of their antiradical activity
- B 10** *R. Mladenova, K. Aleksieva, N. Solakov, K. Loginovska*
Analysis of free radicals and antioxidant potential of perga before and after gamma-irradiation
- B 11** *R. Chimshirova, A. Chakir, M. Popova*
Chemical profiles of South Moroccan propolis
- B 12** *K. Kamenova, V. Kortenova, P. Petrov, D. Momecova*
Synthesis of well-defined amphiphilic block copolymers for preparation of stimuli-responsive niosomes
- B 13** *F. Ublekov, H. Penchev, V. Sinigersky*
XRD Analysis of the structural changes of montmorillonite, physical behavior of nanocomposite proton conducting membranes for fuel cell applications
- B 14** *E. Dimitrov, N. Toncheva-Moncheva, P. Bakardzhiev, K. Mladenova, S. Petrova, P. Videv, V. Moskova-Doumanova, J. A. Doumanov, B. Trzebicka, A. Forsys, S. Rangelov*
Initiator-free conjugation of oligonucleotides via different click reactions for liposomal spherical nucleic acid preparation
- B 15** *E. Dimitrov, N. Toncheva-Moncheva, P. Bakardzhiev, D. Momekova, S. Rangelov*
Synthesis of novel polycaprolactone/polyglycidol based block and star copolymers for design of nanosized drug delivery systems – niosomes
- B 16** *P. Kardaleva, D. Panteleeva, M. Guncheva*
Conformational changes of bovine serum albumin in the presence of ionic liquids containing ibuprofen anion
- B 17** *N. Nachev, M. Spasova, N. Manolova, I. Rashkov and M. Naydenov*
Fibrous polymer materials with antifungal activity for grapevine protection
- B 18** *Ch. Girginov, S. Kozhukharov, P. Petkov*
Anodization as a versatile technique for surface modification
- B 19** *T. Cholakova, L. Kolaklieva, Ch. Bahchedjiev, V. Chitanov, St. Kolchev, R. Kakanakov*
The effect of bilayer thickness on the mechanical properties of multilayer TiN/ZrN and TiCN/ZrCN coatings