

**Fourth regional roundtable: Refractory, process industry,
nanotechnologies and nanomedicine**

ROSOV PINN 2020

Hotel Crystal, Belgrade, Serbia

Jun 5, 2020

Program

Organized by:

Serbian Society for Nanotechnologies and Nanomedicine

Serbian Society for Refractory and Process Industry

Vinča Institute of Nuclear Sciences, Belgrade

Medical Academy Serbia

REAL S Ltd, Belgrade

ALBOS Ltd, Belgrade

Title:

Fourth regional round table: Refractory, process industry, nanotechnologies and nanomedicine
ROSOV PINN 2020

Acknowledgement: The Organizing and Scientific committees of ROSOV PINN 2020 are grateful to the Ministry of Education, Science and Technological Development of the Republic of Serbia for financial support.

Dear colleagues,

We are pleased to welcome you in Belgrade at the fourth regional roundtable “Refractory, process industry, nanotechnologies and nanomedicine”, ROSOV PINN 2020.

Refractory and process industry session will include the lectures on the preparation of mineral raw materials, the cement industry, glass industry, iron and steel and non-ferrous metallurgy. Particular care will be paid to the magnesite raw materials and its semi-products and products. In addition, Round table will include discussion on the raw materials and products with exceptional importance for refractory industry.

Nanotechnology session will cover the general principles of nanotechnology and its place in the development of materials for special applications including alternative energy sources, sensors, carbon materials, etc.

Nanomedicine session will be in the main focus of this year's ROSOV PINN with special emphasis on bone tissue replacement materials and calcium silicates engineering and application in dentistry and novel trends in neurosciences.

The desired intention of the organizers is to collect as many corporate actors, including producers, consumers and providers of services in the field of refractory and process industry and medicine. The aim is also to open innovative ways for the penetration of new technologies based on nanotechnology in various types of industry and medicine in order to create entirely new products. Completely new approaches and technological concepts are welcomed.

We hope that you will have a nice time at our conference and establish new connections with your colleagues from scientific institutions and experts from the industry.

On behalf of the Organizing and Scientific Committee,

Vukoman Jokanović

SCIENTIFIC COMMITTEE

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V. Parpura (The University of Alabama, Birmingham, Alabama, USA)
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J. Potočnik (INN Vinča, Belgrade, Serbia)
D. Milivojević (INN Vinča, Belgrade, Serbia)
B. Čolović (INN Vinča, Belgrade, Serbia)
Dj. Antonijević (INN Vinča, Belgrade, Serbia)
N. Bajić (NSAV IHIS, Belgrade, Serbia)
N. Radić (NSAV IHTM, Belgrade, Serbia)
V. Biočanin (Faculty of Dentistry, Pančevo, Serbia)
M. Tomić (Faculty for Technology and Metalurgy, Zvornik, Republic of Srpska, BiH)

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D. Ilić (Faculty of Dentistry, Belgrade, Serbia)

Plenary lectures:

Prof. Vladimir Parpura (The University of Alabama, Birmingham, Alabama, USA)
Prof. Vladimir Komlev (A. A. Baikov Institute of Metallurgy and Materials Science, Russian Academy of Science, Moscow, Russia)
Prof. Till Dammaschke (Wilhelms-University Münster, Münster, Germany)
Dr. Jovan Nedeljkovic, (Institute for nuclear science „Vinča“, Belgrade, Serbia)

Program

General conference program

Friday, June 5th 2020

8 ³⁰ -	Registration
9 ¹⁵ -9 ³⁰	Opening ceremony
9 ³⁰ -11 ⁰⁰	Plenary lectures
11 ⁰⁰ -11 ¹⁵	Coffee break
11 ¹⁵ -12 ⁴⁵	Plenary lectures
12 ⁴⁵ -13 ⁰⁰	Coffee break
13 ⁰⁰ -14 ²⁰	Invited lectures
14 ²⁰ -15 ³⁰	Lunch break
15 ³⁰ -16 ⁵⁰	Invited lectures
16 ⁵⁰ -17 ⁰⁰	Tea break
17 ⁰⁰ -18 ³⁰	Poster session
18 ³⁰ -19 ⁰⁰	Closing ceremony
19 ⁰⁰	Gala dinner

Program of lectures

Friday, June 5th 2020

Plenary lectures - Hall Nikola Tesla:

09³⁰-11¹⁵ Chairmen: Vladimir Komlev, Vladimir Parpura

09³⁰-10¹⁵ **Professor Vladimir Parpura**
University of Alabama, Birmingham, Alabama, USA
Probing astrocytes and neurons with carbon nanotubes: Implications for translational medicine

10¹⁵-11⁰⁰ **Professor Vladimir Komlev**
Russian Academy of Science, A. Baikov Institute of Metallurgy and Materials Science, Moscow, Russia
From additive production to biofabrication in space of 3D bone grafts

11⁰⁰-11¹⁵ Coffee break

Chairmen: Jovan Nedeljković, Till Dammaschke

11¹⁵-12⁰⁰ **Professor Till Dammaschke**
Wilhelms-University Münster, Münster, Germany
Operative dentistry and endodontology with calcium silicate cements - What lies behind all this?

12⁰⁰-12⁴⁵ **Dr Jovan Nedeljković**
Institute of Nuclear Sciences „Vinča“, Beograd, Serbia
Inorganic-organic hybrid materials: Synthesis, characterization and application

12⁴⁵-13⁰⁰ Coffee break

Invited lectures

Session **Refractory and Process Industry (Hall Mihajlo Pupin)**

13⁰⁰-14¹⁵ Chairmen: Vukoman Jokanović, Milorad Tomić

13⁰⁰-13²⁵ **Vukoman Jokanović**
Institute of Nuclear Sciences Vinca and ALBOS Ltd, Belgrade, Serbia
Refractory today: An example of extraordinary cooperation of one innovative and one small manufacturing company

13²⁵-13⁵⁰ **Nikola Bajić**
Research and Development Center, IHIS Techno-experts d.o.o., Belgrade, Serbia
Development of basic coatings type for welding electrode made from domestic raw materials

13⁵⁰-14¹⁵ **Milorad Tomić**
Faculty for Technology and Metallurgy, Republic of Srpska, Bosnia and Herzegovina
Characterization of the electrodeposited Zn-Mn-Al₂O₃ composite coatings

14¹⁵-15³⁰ Lunch break

Session **Nanotechnology (Hall Mileva Marić)**

15³⁰-16⁴⁵ Chairman: Duško Borka

15³⁰-15⁵⁵ **Duško Borka**
Vinča Institute of Nuclear Sciences, University of Belgrade, Belgrade, Serbia
Interaction of electrons with carbon nanostructures and metallic surfaces

15⁵⁵-16²⁰ **Matović Branko**
Vinča Institute of Nuclear Sciences, University of Belgrade, Belgrade, Serbia
Influence of defect chemistry on the mechanical and functional properties of mayenite (Ca₁₂Al₁₄O₃₃)

16²⁰-16⁴⁵ **Nataša Jović Orsini**
Vinča Institute of Nuclear Sciences, University of Belgrade, Belgrade, Serbia
Magnetic iron oxide nanoparticles as diagnostics and therapeutics agents.

16⁴⁵-17⁰⁰ Tea break

Session Nanomedicine I (Hall Nikola Tesla)

Chairmen: Till Damaschke, Djordje Antonijević

13⁰⁰-13²⁰

Bojana Ćetenović

Institute for Nuclear Sciences „Vinča“, Belgrade, Serbia

Significance and application of nanoparticles in endodontics

13²⁰-13⁴⁰

Nevena Zogović

Institute for Biological Research „SinišaStanković“, Belgrade, Serbia)

Insight in the Methodology of the Biological Evaluation of Novel Biomaterials.

13⁴⁰-14⁰⁰

Djordje Atonijević

Institute for Nuclear Sciences „Vinča“, Belgrade, Serbia

Calcium aluminates: Can they be promising alternative for calcium silicate in dentistry?

14⁰⁰-14²⁰

Marijana Popović

Faculty of Dentistry, Belgrade, Serbia

Challenges and opportunities of the nanostructural biomaterials in endodontics

14²⁰-15³⁰

Lunch break

Session Nanomedicine II (Hall Ivo Andrić)

13⁰⁰-14¹⁵

Chairman: Andreja Gajović

13⁰⁰-13²⁵

Edhem Haskov

Faculty of Natural Sciences, University of Sarajevo, Sarajevo, BiH

Effects of the CDs bethametasone on hematology parameters rats of Rattus norvegicus Berkenhout 1769, in vivo

13²⁵-13⁵⁰

Safija Herenda Islamović

Faculty of Natural Sciences, University of Sarajevo, Sarajevo, BiH

The kinetic effect of corticosteroids on the activity of the enzyme in vitro

13⁵⁰-14¹⁵

Andreja Gajović

Ruđer Bošković Institute, Zagreb, Croatia

TiO₂ nanostructures modified for improved photocatalytic purification of waste water

14¹⁵-15³⁰

Lunch break

Session Refractory and Process industry (Hall Mihajlo Pupin)

15³⁰-16⁴⁵ Moderator: Vukoman Jokanović

15³⁰-16⁴⁵ **Round table**

Eminent professionals from near-by region, Romania, Turkey, China working in refractory industry

Significance of the magnesite raw materials, semi products and products in refractory industry (perspectives till 2026)

16⁴⁵-17⁰⁰ Tea break

Session Nanotechnology (Hall Ivo Andrić)

15³⁰-16⁴⁵ Chairmen: Vladimir Purpura, Miloš Ivanović

15³⁰-15⁵⁵ **Suzana Šegota**

Ruđer Bošković Institute, Zagreb, Croatia

Structural integrity of model lipid membranes with inserted flavonols under oxidative stress conditions

15⁵⁵-16²⁰ **Srđan Lopičić**

Institute for Pathological Physiology, School of Medicine, University of Belgrade
Retzius nerve cells of the leech as a model for investigation of neural electrophysiological effects of nanoparticles

16²⁰-16⁴⁵ **Miloš Ivanović**

University of Zurich, Switzerland

Deriving atomic models of detergent micelles by combining simulations and experimental data

16⁴⁵-17⁰⁰ Tea break

Session	Nanomedicine (Hall Nikola Tesla)
15 ³⁰ -16 ⁵⁰	Chairmen: Vladimir Komlev, Vladimir Biočanin
15 ³⁰ -15 ⁵⁰	Vladimir Biočanin Clinic for Oral Surgery, Faculty of Stomatology, Pančevo, Serbia New horizons in bone augmentation
15 ⁵⁰ -16 ¹⁰	Sanja Milutinović-Smiljanić Faculty of Dentistry, Belgrade, Serbia Effect of Alboos on bone regeneration: a histologic and histomorphometric evaluation
16 ¹⁰ -16 ³⁰	Maja Dutour Sikirić Ruđer Bošković Institute, Zagreb, Croatia Mechanisms of calcium phosphates formation on TiO ₂ nanomaterials. A biomimetic synthetic route for multifunctional nanocomposites for hard tissue regeneration
16 ³⁰ -16 ⁵⁰	Dijana Trišić Faculty of Dentistry, University of Belgrade, Belgrade, Serbia Outstanding osteoinductive properties of ALBO-OS on human dental stem cells
16 ⁵⁰ -17 ⁰⁰	Tea break