



International Student Professional Creative Competition «Materials Science»



Programme of the International Student Professional Creative Competition «Materials Science»

09 June 2026 at 10:00 a.m. (time zone - Kyiv)	Opening of the final scientific and practical online conference.
09 June 2026 at 10:30 a.m. (time zone - Kyiv)	Start of the final scientific and practical online conference for the defence of scientific projects.
10 June 2026	Announcement of the winners of the International Student Professional Creative Competition «Materials Science» on the official website.
<i>Link to the video conference on the ZOOM platform:</i>	https://us02web.zoom.us/j/84098196244?pwd=barulsPDaXSQ0sNb0x9XlaM6EbUEl.2.1 <ul style="list-style-type: none">• Conference ID: 840 9819 6244• Access code: 2026
<i>For further information, please contact:</i>	<ul style="list-style-type: none">• Member of the Organising Committee, Deputy Chair of the Competition Jury - Diana HLUSHKOVA, tel. +38 (097) 481 15 93• Organisational secretary of the competition - Vladyslava BAIDALA, tel. +38 (095) 355 88 90
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Rules for submitting scientific projects:

Each participant in the Competition is given no more than **10 minutes** to present and defend their science project, including: 5-7 minutes for presentation and defence (the presentation should not exceed 20 slides), and 3-5 minutes for questions from the jury members. Participant presentations should be concise and clear, focusing on the key aspects of their research.

Sequence of defence of scientific projects at the final scientific and practical online conference

1	Irina DYADYURA Odesa National Polytechnic University (Ukraine)	Design biomimetic tpms scaffolds of hydroxyapatite for medical applications.
2	Illia YEVMENIEV Central Ukrainian National Technical University (Ukraine)	Adaptation of Classical Al ₂ O ₃ Diffusion Sintering Models Using Machine Learning Methods.
3	Sofia NOZHENKO Dnipro University of Technology (Ukraine)	Relationship between plastic deformation, bainitic colony formation, and mechanical property combination in low-carbon low-alloy steels.
4	Vyacheslav SHEPTYTSKY, Andriy NOZHENKO Mykolayiv National Agrarian University (Ukraine)	Development of a technological process for manufacturing splined shafts on CNC machines.
5	Makar SHYNGERA Ternopil Ivan Puluj National Technical University (Ukraine)	Thermal insulation performance of microsphere composite coatings for building envelopes.
6	Vitalii SHAROVKA, Artem DANYLENKO Kharkiv National Automobile and Highway University (Ukraine)	Combining and optimizing the properties of Cu-Al ₂ O ₃ metal-ceramic composites with tunable thermophysical characteristics.
7	Vitalii LISHCHYNA Lutsk National Technical University (Ukraine)	Development of biocomposite materials with chemical treatment of natural fillers.
8	Zakhar HLADCHENKO Lviv Polytechnic National University (Ukraine)	Analysis of the effectiveness of traditional and additive methods for creating wax models in jewelry production.
9	Anastasia SOKOLOVSKA Zaporizhzhia National University (Ukraine)	Optimal Phase Selection in the Ni-Ti System for Thermochemical Pressing: Thermodynamic Analysis and Experimental Synthesis of Equiatomic NiTi.
10	Vadym CHYZHOV, Bohdan PEREKUPKO Sumy State University (Ukraine)	Electrospark Alloying of Steel Cutting Tools with Transition Metal Borides for Enhanced Wear Resistance in Nuclear Applications.
11	Daniil TRETIAK, Aleksandar STOIKOVYCH Vasyl Stefanyk Carpathian National University (Ukraine)	Synthesis, Structure, and Morphology of TiO ₂ /Fe ₂ O ₃ Nanocomposites Obtained by the Sol-Gel Method.
12	Oleksandr VILCHYNSKY, Dmytro BOVROSH Mykolayiv National Agrarian University (Ukraine)	The influence of elastic polymer coatings on the preservation of grain quality.

13	Valeriia DEMIANENKO National University «Zaporizhzhia Polytechnic» (Ukraine)	Analysis of failure causes in highly loaded parts of the bolt group of a small arms system.
14	Dmytro DAN'KO, Ihor OKHRIMENKO Mykolayiv National Agrarian University (Ukraine)	Enhancement of the Physical, Mechanical, and Operational Properties of Functional Plasma Coatings for Use in Mechanical Engineering.
15	Oleksandr VNUKOV Ukrainian State University of Science and Technology (Ukraine)	Structural-phase transformations and mechanical properties of 7075 alloy under combined processing “Roll casting – Hot rolling – Heat treatment”.
16	Valeriia ANDRIIUK, Kateryna MONAKHOVA Dnipro University of Technology (Ukraine)	Investigation of the effect of cyclic loading on the failure processes of zirconia and titanium dental implants.
17	Denis POCITARI Alecu Russo Balti State University (Republic of Moldova), Denys KOLOBOV Kharkiv National Automobile and Highway University (Ukraine)	Improving the corrosion resistance of pipes made of duplex (ferritic-austenitic) steels.
18	Mikhailo KORSHUN National Technical University «Kharkiv Polytechnic Institute» (Ukraine)	Siliconizing of carbon structural steel at different saturation temperatures.
19	Oleksandr ZUBKOV, Yaroslav VOVK Kharkiv National Automobile and Highway University (Ukraine)	Plasma coatings of the adaptive type for gas turbine engine components.
20	Dariia SOLONCHUK National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute» (Ukraine)	Complex Cr-Al diffusion coatings: structure, phase composition and protective effect.
21	Bohdan BYSTRYTSKYI Polissia National University (Ukraine)	Justification for the Selection of Materials for the Working Parts of Disc Tillage Machines Based on a Study of the Tribological Properties of 65Г and 28MnB5 Steels.
22	Andrii PUTIVSKYI, Mykola LISNICHENKO Kharkiv National Automobile and Highway University (Ukraine)	Design and Structural Characteristics of Heterogeneous Composite Materials for Tribological Applications.
23	Oleksandr DRACH Kherson Educational and Scientific Institute of Admiral Makarov National University of Shipbuilding (Ukraine)	Modelling of welding technology.

24	<p>Beibarys TOLEGENOV L. B. Goncharov Kazakh Automobile and Road Institute (Kazakhstan),</p> <p>Oleksii HANTSEV Kharkiv National Automobile and Highway University (Ukraine)</p>	<p>Optimization of the conditions for the formation and sintering of powder composites for the precision engineering industry.</p>
25	<p>Kyrylo SAZONOV, Yegor SERGEIEV Kharkiv National Automobile and Highway University (Ukraine)</p>	<p>Analysis and Selection of the Structure and Properties of Gas-Thermal Coatings for Piston Rings in Dual-Purpose Engines.</p>
26	<p>Anatolie FATNIC Alecu Russo Balti State University (Republic of Moldova),</p> <p>Valentyn DASHUTIN Kharkiv National Automobile and Highway University (Ukraine)</p>	<p>Improving the Corrosion and Mechanical Resistance of Hydraulic Drive Components Using Ion-Plasma Modification Techniques.</p>
27	<p>Yaroslav BATURIN, Igor TROFIMENKO Mykolayiv National Agrarian University (Ukraine)</p>	<p>Research on the rigidity of the machine tool-tool-part technological system during running-in of machine parts.</p>
28	<p>Pavlo HERICH Kharkiv National University of Radio Electronics (Ukraine)</p>	<p>Materials-Science Justification of MXene-Modified Composite Scaffolds for Bone Tissue Regeneration.</p>
29	<p>Vladyslav ROMANIUK, Yevheniia SIVACH National University of Civil Protection of Ukraine (Ukraine)</p>	<p>Evaluation of the efficiency of the application of fiber-reinforced concrete in the constructions of defensive and fortification structures.</p>
30	<p>Bogdan BELYANSKIY, Volodymyr MALYCH National University «Yuri Kondratyuk Poltava Polytechnic» (Ukraine)</p>	<p>Optimization of the ejector mixer for drilling mud.</p>
31	<p>Daria BULAVINA O. M. Beketov National University of Urban Economy in Kharkiv (Ukraine)</p>	<p>Lithium disilicate ceramics as a matrix for immobilization of radioactive waste properties and application prospects.</p>
32	<p>Valeriia SIEROKUROVA, Ihor ZANKO Kharkiv National Automobile and Highway University (Ukraine)</p>	<p>Electrospark Engineering of Surfaces in High-Load Components of Construction and Mining Equipment.</p>
33	<p>Dmitry SOLOVYOV, Roman ROMANCHUK Mykolayiv National Agrarian University (Ukraine)</p>	<p>Research on mechanical characteristics and strength of anisotropic composite materials.</p>
34	<p>Bohdan RASHCHENKO, Maksym ROMAS Sumy National Agrarian University (Ukraine)</p>	<p>Influence of Graphene on the Running-in Properties of Electro-Spark Coatings.</p>
35	<p>Oleksiy OSADCHY National university of life and environmental sciences of Ukraine (Ukraine)</p>	<p>Prospects for obtaining and using metal nanoparticles.</p>

36	<p>Junyu JIANG Zhejiang International Maritime College (China), Kostiantyn PAVLOVSKYI Kharkiv National Automobile and Highway University (Ukraine)</p>	<p>Nanostructural modification and control of the functional properties of working surfaces on heavy equipment components.</p>
37	<p>Oleksandr KONSTANDOHLO Odessa State Agrarian University (Ukraine)</p>	<p>Technologies of electrospark alloying in the restoration of parts.</p>
38	<p>Michal MARCINIAK Constanta Maritime University (Romania), Oleksii NOVIKOV Kharkiv National Automobile and Highway University (Ukraine)</p>	<p>Study of wear-resistant plasma-sprayed materials operating under gas-abrasive wear conditions.</p>
39	<p>Cheng QIAN Jiangsu Ocean University (China), Vladislav KOTELNIKOV Mykolayiv National Agrarian University (Ukraine)</p>	<p>The influence of FDM printing parameters on the mechanical properties of PLA plastic products.</p>
40	<p>Artem SHUT Central Ukrainian National Technical University (Ukraine)</p>	<p>Regularities of thermophysical processes of formation of spheroidal graphite in modified cast irons.</p>
41	<p>Andriana MAKSYMovyCH, Viktoriia MYSHKULYNETS Vasyl Stefanyk Carpathian National University (Ukraine)</p>	<p>Crystal structure and morphology of lithium iron spinel depending on the cooling mode.</p>
42	<p>Yevhen VYSHENKO, Oleksandr BONDARENKO National University «Zaporizhzhia Polytechnic» (Ukraine)</p>	<p>A Biodegradable Mg-Zr-Nd-Zn Alloy with Degradation Kinetics Matched to Bone Healing.</p>