

In 2022, the competition "Startup - UzhNU: innovative ideas that bring victory closer!" was held. 8 brightest projects were selected for the last stage of the competition.



The project "Comprehensive medical and information program for dental identification of military personnel and persons injured as a result of military operations: algorithm and software" of the team of authors Myroslav and Ihor Goncharuk-Khomin, Ihor Tukalo, Vitaly Rusyn won the victory. The objectives of the project are: 1) development of a logical algorithm for the identification of persons for dental status, data from X-ray examinations and internal scanning, as the primary objective stage of diagnosis of changes in the maxillofacial apparatus of military personnel and persons whose professional activity is associated with a risk to life; 2) optimization of the software in order to implement a step-by-step protocol in automatic and semi-automatic mode by graphical processing of the results of radiological diagnostics and intraoral scanning; 3) development of criteria for verifying the authenticity of identification in order to ensure objective results of forensic dental examinations and their implementation in the practical work of forensic bodies and practical dental activities.



The second place is the project "Ultrahard strengthening of the surfaces of dual-purpose parts", which was presented by Oleksandr Kuzmenko. To implement the technology, a complex consisting of chambers for air purification during coating application was developed. The developed equipment is designed to provide dust protection for technological equipment for alloying processes during the production of parts in mass and small-scale production.

Матеріал	Технологія нанесення	Склад, мас. %	Твердість покриття
NC130	ГН	NC1/33SiC	680-990 HV
FC330	ГН	Fe/50SiC	680-1300 HV
AC150	ГН	Al5/50SiC	340-430 HV
NAA40	ГН	NA1/40SAO3	350-575 HV
NC162330	ГН	ZrMC/73Si (70%OxO2 - X1C)	710-1100 HV
FA11	ГН	FeAl/13% Al2O3	390-730 HV
NC175	ГН	AlO/73Si O2O3	670-920 HV
США 234	ВА	SiC/20PMN	9.9 ГПа
США 5	ВА	SiC/OxO2/Al	HRC 36-60

The third place went to the project "New medicinal form of an antiseptic agent for quick individual use", which was presented by Oleksandra Kolesnyk and Ivan Sklyar. The task of the project was the development of an effective antimicrobial composition for local use and the creation of an individual set of

antiseptic material for fixing the bandage. This problem is especially relevant in the conditions of war. The development and timely use of dressing material will contribute to the prevention of complications and will allow in some cases to prevent disability.

