

International Competition of Student Scientific Works “Black Sea Science 2024”

2nd stage results for the field of “Power Engineering and Energy Efficiency”

Place	Country	Institution	Work Title	Authors	Supervisors	Score		
						Stage 1	Stage 2	Total
I	Ukraine	O. M. Beketov Kharkiv National University of Urban Economy	Influence of spectral power distribution on the energy efficiency of LED lamps	Lysenko Olha	Kolesnyk Anastasia	85	28	113
I	Ukraine	National Technical University of Ukraine "Ihor Sikorsky Kyiv Polytechnic Institute	Design of heating and ventilation systems of a three-room residential building with application of solar heating system	Oliferuk Taras, Dovhan Vladyslav	Sheleshei Tetiana, Bednarska Inna	90	21	111
II	Ukraine	National University “Yuri Kondratyuk Poltava Polytechnic	Enhancing the energy efficiency of the heating system with the solid fuel boiler	Lytvynenko Victor	Chernetska Iryna, Kutnyi Bogdan	86	24	110
II	Ukraine	State Biotechnological University	Study of the energy efficiency of the process of freezing chicken offal products	Kolesnik Sergey	Potapov Volodymyr, Molskii Oleksandr	91	18	109
II	Ukraine	Odesa National University of Technology	Energy efficiency of air conditioning systems of premises based on evaporative cooling in Odesa	Goriachenko Roman	Zhykharieva Nataliia	89	18	107
III	Ukraine	Vinnytsia National Technical University	The increase of electrical networks monitoring with smart metering devices	Shcherbatyi Danylo	Malogulko Julia	83	23	106
III	Ukraine	National Technical University of Ukraine "Ihor Sikorsky Kyiv Polytechnic Institute	Technoeconomic analysis of direct air capture in the climatic conditions of Ukraine	Skrypnyk Polina	Sereda Volodymyr	95	11	106

III	Kazakhstan	Almaty Technological University	Selection of an effective refrigerant to replace ozone-hazardous R22 at the Medeu skating rink	Kadir Khan Erkebulan	Tsoy Anatolii	90	15	105
III	Ukraine	National University "Yuri Kondratyuk Poltava Polytechnic	Finding the optimal method of fruit drying with regard to energy efficiency	Perederiy Alina	Chernetska Iryna, Guzyk Dmytro	94	10	104
III	Ukraine	National University of Life and Environmental Sciences of Ukraine University of West Bohemia	Innovative methods of drying rapeseeds using microwave energy	Nechyporenko Daria	Bandura Valentyna, Rubanenko Olena	88	14	102
III	Ukraine	Mykolaiv National Agrarian University	Determination of optimal geometric ratios of the electromagnetic system of an electrical device	Postulha Maksym, Kryzhanovskiy Rostyslav	Sadovyi Oleksii	88	11	99
	Ukraine	Lviv Polytechnic National University	Thermal-Hydraulic Analysis of the Efficiency of Aqueous Dispersion with Al ₂ O ₃ Nano-Particles In the Heat Exchanger of the ECCS System of Emergency Planned Cooling	Kuchynskiy Volodymyr	Rymar Tetiana	82		
	Ukraine	National Technical University of Ukraine "Ihor Sikorsky Kyiv Polytechnic Institute	Modeling and investigating the characteristics of a single-stage and two-stage thermoelectric generator	Zhydkov Oleksandr	Gilchuk Andrii	81		
	Ukraine	State Biotechnological University	Prospects of the use of biogas installations in the combined energy system of Ukraine on the basis of the analysis of the energy balance	Chorna Vlada	Dudnikov Serhii	81		
	Ukraine	National Technical University of Ukraine "Ihor Sikorsky Kyiv Polytechnic Institute	To calculate and design a bioenergy plant for the production of biogas from agricultural waste	Matusevych Khrystyna, Syvachenko Viktoriia	Sheleshei Tetiana, Bednarska Inna	79		
	Ukraine	National Technical University «Kharkiv Polytechnic Institute»	Influence of constructive and technological parameters on the wave resistance of coaxial cables	Siiatovskiy Denys, Ishchenko Roman	Gontar Yuliia, Kiessaiev Oleksandr	78		

	Ukraine	Odesa National University of Technology	Adaptation of thermodynamic analysis methods to determine the energy efficiency of cascade refrigerating machines for recontainers	Yerema Volodymyr	Sokolovska-Yefymenko Viktoria	78		
	Ukraine	Kherson Educational-Scientific Institute of Admiral Makarov National University of Shipbuilding	Increasing the energy efficiency of the internal combustion engine by adjusting the flow section of the turbochargers nozzle	Kazenov Yehor, Bohuslavskyy Yevhenii	Kalinichenko Ivan, Kobalava Halina	77		
	Ukraine	Mykolaiv National Agrarian University	Study of a transformer based heating element	Chyniakov Nikita, Tsentii Roman	Stavynskyy Andrii	76		
	Ukraine	Kharkiv National University of Urban Economy named after O.M. Beketova	Energy-efficient greenhouse without natural light	Kotenko Anna	Iegorova Olga	76		
	Ukraine	National Technical University of Ukraine "Ihor Sikorsky Kyiv Polytechnic Institute	GaAs film growth using the LP-MOCVD method	Siryak Tanya	Gilchuk Andrii	76		
	Ukraine	Odesa National University of Technology	Theoretical study of mixed cycles of refrigerating units intended for long-term storage of biological objects at a temperature level of 123 K.	Andriuschenko Ivan	Mykhailo Kravchenko	75		
	Ukraine	National Technical University of Ukraine "Ihor Sikorsky Kyiv Polytechnic Institute	Calculation of solar collector design for a typical building	Granishevs`ka Anzhela, Sapon Vladislav	Sheleshei Tetiana, Bednarska Inna	75		
	Ukraine	Odesa National University of Technology	Improving energy efficiency of the systems for obtaining water from atmospheric air	Dmytrenko Volodymyr	Vasyliv Oleh	74		
	Ukraine	Vinnytsia National Technical University	Prospects for the introduction of technologies for the use of small modular reactors	Slidenko Mykola	Malogulko Julia	74		

	Ukraine	Mykolaiv National Agrarian University	Improvement of the cooling system of the power three-phase transformer	Kaluzhyn Danylo, Turdubakiev Volodymyr	Mardziavko Vitalii	74		
	Ukraine	Odesa National University of Technology	Analysis of the expediency of using gas accumulators to protect demand pipelines from hydraulic shock	Dzivinska Marina	Volgusheva Nataliia	74		
	Ukraine	Odesa National University of Technology	Research of alternative technologies for conversion of the Ukrainian natural gas market	Golovchenko Yevheniia	Diachenko Tetiana	73		
	Ukraine	National University "Yuri Kondratyuk Poltava Polytechnic	Development of an energy-efficient system of centralized heat supply using heat pumps	Yermolenko Danyl	Kolienko Anatoly, Turchenko Vitaly	73		
	Ukraine	Odesa National University of Technology	Features of microclimate systems for non-residential buildings with non-standard height	Boretskyi Yurii	Zhykharieva Nataliia	73		
	Ukraine	Odesa National University of Technology	Evaluation of the prospects for preliminary cooling of natural gas on main pipelines before compression through the discharge of exhaust heat of gas-turbine units	Baranov Andriy	Bilenko Nataliia	72		
	Ukraine	National Technical University of Ukraine "Ihor Sikorsky Kyiv Polytechnic Institute	Study of the renewable energy potential of Ukraine in the conditions of war	Shuripa Danylo, Borysenko Dmytro, Holovko Oleksandr	Ivakhnov Andrii, Fedorchuk Stanislav	72		
	Ukraine	Vinnitsia National Agrarian University	Development of methods for calculating inductances of a harmonic filters based a their design parameters	Hrygorenko Olexandr	Hraniak Valerii	72		
	Ukraine	Mykolaiv National Agrarian University	Development of the pre-processing installation cereal crops by pulse corona discharges	Nor Rustam, Kurin Vadym	Rudenko Andrii	71		

	Ukraine	Odesa National University of Technology	The impact of refrigeration equipment on the environment and methods of reducing this impact	Kharytonchuk Dmytro	Basov Anatolij	71		
	Ukraine	National Technical University of Ukraine "Ihor Sikorsky Kyiv Polytechnic Institute	Overview of the development trend of hydrogen filling stations	Shvets Konstantin	Boichenko Serhii	71		
	Ukraine	Vinnitsia National Agrarian University	Prospects of biogas and digestate production at sugar factories to ensure food and energy security of the state	Sadlovska Viktoriia	Hontaruk Yaroslav, Furman Iryna	70		
	Ukraine	Mykolaiv National Agrarian University	An efficient electric drive based on an asynchronous motor with permanent magnets	Mazur Volodymyr, Fedchenko Oleh	Martynenko Volodymyr	70		
	Kazakhstan	Almaty Technological University	Prospects for the use of environmentally friendly refrigerant R290 in Kazakhstan	Mukanzhanov Ildar	Tsoy Anatolii	70		
	Ukraine	Odesa National University of Technology	Innovative evaporative cooling technologies	Oliinyk Ihor	Kogut Volodymyr	70		
	Ukraine	State Biotechnological University	Improved energy efficiency of refrigeration equipment	Kuznetsov Ivan	Semeniuk Dmytro	69		
	Ukraine	State Biotechnological University	The project of a vending machine with a refrigeration unit	Shatokhin Ivan	Iakushenko Yevhen	68		
	Ukraine	National University Odesa Polytechnic	Monitoring the tightness of the shells of thermal imaging elements of thermal imaging assemblies of VVER reactors	Shumska Katerina	Klymchuk Oleksandr	67		
	Ukraine	State Biotechnological University	Justification of the application of the infrared laser module for the processing of juices in the flow	Khalin Daniil	Smilyk Maksym	67		