

International Competition of Student Scientific Works “Black Sea Science 2023”

1st stage results for the field of “Power Engineering and Energy Efficiency”

Country	Institution	Work Title	Author(s)	Supervisor(s)	Score
Ukraine	Ivan Kozhedub Kharkiv National Air Force University	Determination of ways of protecting critical objects of the energy complex against air strikes through the joint application of different forces and means	Andrii Soliakov	Andrii Volkov	94
Ukraine	National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute	Energy and resource saving in heat supply and mechanisms of energy saving devices functioning (on the example of heat pumps and their usage in the modern world and in Ukraine)	Illia Bilko	Tetyana Sheleshei	93
Ukraine	Odesa National University of Technology	Models of refrigerating devices in the open modeling system TT-RH	Serhiy Lomovtsev	Boris Lomovtsev	90
Ukraine	Mykolayiv National Agrarian University	Development of a methodology for increasing the efficiency of a wind turbine	Yevhen Priadko, Ruslan Kravchenko	Oleksii Sadovyi	89
Ukraine	Kherson Educational-Scientific Institute of Admiral Makarov National University of Shipbuilding	Energy recovery of a household heating stove	Andriy Kudrenko, Ksenia Yanovska	Maryna Litvinova, Oleksandr Shtanko	87
Ukraine	Central Ukrainian National Technical University	Energy efficiency of LED luminaires in terms of their use for street lighting	Iryna Ptashnyk	Vasyl Klymenko, Ivan Savelenko	85
Ukraine	National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute»	Optimization of the local marine energy system with diesel-generators	Daria Pluzhnyk, Bohdan Lisovyk	Halyna Bielokha	85
Ukraine	Vasyl` Stus Donetsk National University	Condition and prospective directions of development of renewable energy in Ukraine	Pavlo Panasiuk	Anton Voronin	84
Ukraine	National University «Yuriy Kondratyuk Poltava Polytechnic»	Intelligent control system of greenhouse microclimate parameters	Andrew Ostapenko	Svitlana Kyslytsia	83

Ukraine	National University of Life and Environmental Sciences of Ukraine	Implementation of an energy efficient driving system based on the consumption of energy carriers as a way to increase energy conservation in higher education institutions	Oleksii Kuchmar	Oleksandr Okushko, Ivan Radko	81
Ukraine	Odesa Technical Vocational College of Odesa National University of Technology	Development of energy-saving technologies and cooling systems for grain storage of small seed cultures	Dmytro Bolbas	Serhii Petushenko	81
Germany	Technische Universitat Berlin	Exergy And Risk Analysis Applied To The Hydrogen Supply Chair	Ivan Benedicto Constatijn	Jimena Incer Valverde	79
Poland	Kielce University of Technology	Technical design of the electricity storage facility powered by a photovoltaic instalation supported by Matlab and PVSol software	Michal Matejek	Koshlak Hanna	78
Ukraine	Mykolayiv National Agrarian University	Development of a low-energy installation for electro-hydro-impulse processing in the technological processes of livestock	Rostislav Kryzhanovskiy, Andrii Chirikov	Larissa Vakhonina	74
Ukraine	National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute»	Efficiency of the stirling engine on the shape memory effect	Oleksandr Zhydkov	Andrii Gilchuk	73
Ukraine	Lutsk National Technical University	Auxiliary power source	Oleksandr Ostapchuk	Nina Zdolbitska	72
Ukraine	Ivan Kozhedub Kharkiv National Air Force University	Study of radiation background in public areas	Andriy Savoteev, Anastasiia Vershyhora	Dmytro Voronov	72
Ukraine	Kyiv National University of Construction and Architecture	Modernization of systems at thermal energy facilities	Andrii Riazanov	Nataliia Zhuravska	72
Ukraine	Mykolayiv National Agrarian University	Development of a plant for the manufacture of wear-resistant parts of mining equipment	Artem Fihol, Serhii Dorozhynskyi	Larysa Vakhonina	72
Ukraine	National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute»	Influence of a change in the thermal loading on the temperature of exhaust gases of the boilers used by gas-&-fuel fired heat and power plants	Irina Olimenko	Tetyana Sheleshei	72
Ukraine	V. N. Karazin Kharkiv National University Kremenchuk High Vocational Training School № 7	Research of the efficiency of using energy resources for individual heating systems taking into account the climate conditions	Maryna Khaichina, Danylo Zhukov	Hanna Klymenko, Varvara Chernenko	71

Ukraine	Odesa National University of Technology	Synthesis of the scheme of the CO ₂ transcritical cycle machine for the production of dry ice	Ivan Petiukh	Larisa Morozyuk	70
Ukraine	Odesa National Polytechnic University	Justification of the location of a nuclear energy source for securing the Odesa region	Oleksii Bielozorov	Volodymyr Kravchenko	70
Ukraine	Mykolayiv National Agrarian University	Dynamic stability of substation busbars in short-circuit modes	Yura Pustovoitenko, Yevhenii Chaichuk	Oleksii Sadovyi	69
Ukraine	Vinnitsa National Agrarian University	Vibro-forecasting of fault development in hydropower units	Olexandr Grygorenko	Valerii Hraniak	69
Ukraine	Kyiv National University of Construction and Architecture	Modernization of systems at thermal energy facilities	Andrii Riazanov	Nataliia Zhuravska	69
Ukraine	Mykolayiv National Agrarian University	Microprocessor system of registration of transient processes in 110/35 kV electrical networks	Volodymyr Turdubakiiiev, Ihor Saiko	Oleksandr Tsyhanov	69
Ukraine	National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute»	Implementation of smart energy systems as a component of a smart city using big data: current challenges and trends	Lidiia Shumska, Tetiana Rybak	Svitlana Chukut	69
Ukraine	National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute»	Dependence of the temperature of effluent gases of the boilers on a change in the loading of thermal power plants	Kyrylo Tsyhanov	Tetyana Sheleshei	68
Ukraine	Odesa State Agrarian University	Energy saving in the formation of the structure and composition of technological complexes for grain harvesting	Volodymyr Supruniuk	Dmitro Domushchi	68
Ukraine	National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute»	Improvement of environmental performance of kvgm 100 boiler units by modernization of burner devices	Yuriy Budya, Victoria Yurchuk	Tetyana Sheleshei, Inna Bednarska	67
Ukraine	Odesa National University of Technology	Research of an air separation unit of medium productivity for obtaining liquid technical oxygen	Viktor Yanchuk	Anatolij Basov	66
Ukraine	Odesa National University of Technology	Increasing the energy efficiency of systems for obtaining water from atmospheric air	Sofiia Orlianska	Nataliia Bilenko	66
Ukraine	Odesa National University of Technology	Thermoeconomic analysis chicken carcass pre-cooling and freezing system	Mykyta Kharitonov	Nataliia Zhykharieva	66

Ukraine	Odesa National University of Technology	Researcher and use of ozone-unsafe freons in medical establishments	Yurii Boretskyi	Nataliia Zhykharieva	65
Ukraine	Odesa National University of Technology	Modernization of an ammonia refrigeration machine at a dairy plant	Roman Horiachenko, Denys Bereziuk	Volodymyr Kohut, Nataliia Zhykharieva	65
Ukraine	Odesa National University of Technology	Research of different methods of cooling milk in plate coolers	Mykyta Fedianin	Volodymyr Kohut	64
Ukraine	Odesa National University of Technology	Energy fence in the primary circuit of the heat pump	Chumachenko Oleksandr	Iurii Demianenko	63
Ukraine	O.M. Beketov National University of Urban Economy in Kharkiv	Improvement of cementing of production columns of oil and gas wells with hydrophobic materials of the Ramsinks 2 group in various mining and geological conditions	Hennadii Franchuk		62
Ukraine	Kherson Educational-Scientific Institute of Admiral Makarov National University of Shipbuilding	Investigation of Contact Cooling Influence on the Gas Turbine Efficiency	Yehor Kazenov		62
Ukraine	Odesa National University of Technology	Research of air velocity in air ducts to increase the energy efficiency of an air conditioner	Andrii Kokhanskyi	Nataliia Zhykharieva	62
Ukraine	Odesa National University of Technology	Approaches to optimizing the reliability of reservoirs for petroleum products	Ielizaveta Boiko	Natalia Volgusheva	61
Ukraine	National Technical University «Kharkiv Polytechnic Institute	Estimation of limiting stages of heat exchange between gas and liquid in a contact economizer	Danylo Vorona, Kvita Olesia	Tseitlin Musii, Rayko Valentyna	61
Ukraine	State Biotechnological University	Analysis of the modern development of the fuel and energy complex of Ukraine, taking into account renewable sources	Mykhailo Tobert		61
Ukraine	Oles Honchar Dnipro National University	Increasing the energy efficiency of the heating system of a private house based on a solar collector	Serhii Parshennikov		60