International Competition of Student Scientific Works "Black Sea Science 2025"

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

Country	Institution	Work Title	Authors	Supervisors	Score
Ukraine	Kherson Educational-Scientific Institute of Admiral Makarov National University of Shipbuilding	Investigation of Design Parameters of the Thermopressor Flow Part for Air Cooling Systems	Meshenko Oleksandr	Kobalava Halina	**98**
Ukraine	State Biotechnology University	Autonomous Cooling System Based on Cold Accumulators and Photoconverters	Yermolenko Oleksandra	Tsurkan Mykola, Smilyk Maksym	**97**
Ukraine	Kherson Educational-Scientific Institute of Admiral Makarov National University of Shipbuilding	Assessment of the Efficiency of Using an Alternative Steam Generator Heat Pump Unit on a Ship	Korneeva Evgenia	Kalinichenko Ivan	**96**
Ukraine	Sumy State University PJSC "Sumyoblenegro"	Optimizing the Operating Modes of Transformers in Electrical Networks with Distributed Generation	Koshlatyi Eduard	Diahovchenko Illia, Chuprun Anastasiia	**94**
Ukraine	State Biotechnological University	Increasing the Efficiency of the Fuel and Energy Complex of Ukraine Using Bioenergy Plants	Sologub-Yosef Rafael, Yaroslav Rodik	Dudnikov Serhii	**92**
Ukraine	Vinnytsia National Technical University	Improving the Energy Efficiency of the Enterprise Using Reactive Power Compensation	Dmytryk Serhii, Halushko Ivan	Babenko Oleksii	**91**
Ukraine	Mykolaiv National Agrarian University	Development of Optimal Geometric Parameters of a Rod Electromagnetic System for Power Electrical Equipment	Tumakov Maksym, Fuchenko Serhii	Stavynskyi Andrii	**90**
Ukraine	National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"	Heating and Energy Supply for a Residential Building Based on a Solar System Calculation of the Hot Water Supply System of a Building Using Solar Collectors for the City of Odesa	Hranishevska Anzhela, Sapon Vladyslav	Sheleshei Tetiana	**90**

Country	Institution	Work Title	Authors	Supervisors	Score
Ukraine	Kherson State Agrarian and Economic University	Smart Charging System for Batteries in Energy Systems with Alternative Energy Sources	Almashov Daniil, Garkusha Vitaliy	Zubenko Valentyna	**89**
Ukraine	National Academy of the National Guard of Ukraine	Development of a Project for a Mobile Autonomous Solar Power Plant for Operation by Military Units in Field Conditions	Doniy Vladyslav	Novykova Olena	**88**
Ukraine	Mykolaiv National Agrarian University	Calculation of Optimal Parameters of Electrical Equipment for an Irrigation System	Holubiev Volodymyr, Sereda Vitalii	Sadovyi Oleksii	**87**
Ukraine	Vinnytsia National Agrarian University	Perspectives of Biomethane Production as a Way to Ensure Energy Security in Ukraine	Panasiuk Liza, Budza Serhiy	Okhota Yuliia	**87**
Ukraine	Sumy State University	Simulation of Operating Modes of the 110/6 kV “Brody” Transformer Substation	Volkogon Eduard, Dmitriev Mykyta	Vasileha Petro, Lebedka Serhiy	**87**
Ukraine	National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”	Improving the Environmental Efficiency of Energy Equipment at Thermal Power Plants: Analysis of Technologies and Calculation of Harmful Emission Indicators	Usov Ivan, Mentii Mykhailo	Sheleshei Tetiana, Bednarska Inna	**86**
Ukraine	Mykolaiv National Agrarian University	Creation of an Energy-Efficient Installation for Electrohydropulse Treatment in Livestock Technological Processes	Petrov Artem, Yanosh Oleksandr	Vakhonina Larysa	**86**
Ukraine	Sumy State University	Digital Measurement Device for Monitoring the Main Characteristics of the Power Grid	Reva Vladyslava	Petrovskyi Mykhailo, Nesterenko Bohdan	**85**
Ukraine	Kharkiv National Automobile and Highway University	Unification of the Magnetic System of Traction Motors for Electric Vehicles	Kadnai Mikhailo	Nechaus Andrii	**85**
Ukraine	Odesa National University of Technology	Study of the Prospects of Using Artificial Cold at Compressor Stations of Main Gas Pipes to Reduce Operating Costs of Natural Gas	Feloniuk Serhii	Doroshenko Volodimir	**85**
Ukraine	Odesa National University of Technology	Prospective Designs of Atmospheric Water Extraction Systems Using Solar Energy	Bilyi Oleksii	Nikitin Dmytro	**85**
Ukraine	Vinnytsia National Agrarian University	Development of Methods for Calculating Inductances of Higher Harmonic Filters Based on Their Design Parameters	Hryhorenko Olexandr	Hraniak Valerii	**84**

Country	Institution	Work Title	Authors	Supervisors	Score
Ukraine	Odesa National University of Technology	Enhancement of Energy Efficiency in Air Conditioning Systems through the Use of Heat Recovery Units of Various Types	Yefremov Ihor	Zhykharieva Nataliia	**80**
Ukraine	National University «Yuri Kondratyuk Poltava Polytechnic»	Automated Continuous-Discrete Sun Tracking System for Autonomous Photovoltaic Plants	Bryzhak Kostiantyn, Poltser Stanislav	Kyslytsia Svitlana	**79**
Ukraine	Odesa National University of Technology	Improving the Efficiency of a Compressor Station by Utilizing the Heat from the Exhaust Gases of Gas Turbine Engines	Sahala Violeta	Kolohryvov Mykhailo	**78**
Ukraine	Odesa National University of Technology	Challenges and Strategies for Enhancing Oil Production in Ukraine’s Late-Stage Oil Field Development	Doroshenko Volodymyr	Vasyliv Oleg	**78**
Ukraine	Sumy State University	Implementation of Net Metering and Net Billing as a Pathway for Stimulating Renewable Energy Development in Post-war Ukraine	Hasich Nikita	Zahorodnia Tetiana	**76**
Ukraine	National University "Zaporizhzhia Polytechnic"	Energy Saving as a Way of Achieving Energy Independence	Tomachenko Daria	Bratkovska Kateryna	**76**
Ukraine	Vinnytsia National Technical University	Integration of Modular Small Reactors into the Energy System of Ukraine Challenges and Prospects in the Conditions of War and Post-War Reconstruction	Slidenko Mykola	Malohulko Yulia	**75**
Ukraine	National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”	Advantages of Introducing Gas Turbine Plants in the Energy Sector of Ukraine in a Situation of Loss of Most Peak and Semi-peak Generating Capacities. Environmental Indicators	Yatsenko Stanislav, Teslenko Maksym	Sheleshei Tetiana, Bednarska Inna	**74**
Ukraine	Odesa National University of Technology	Development and Research of Systems for Obtaining Water from Atmospheric Air Using Traditional and Renewable Energy Sources	Hodyk Kostyantin	Volgusheva Natalya	**73**
Ukraine	Odesa National University of Technology	Absorption Water-Ammonia Thermotransformers in Small Power Systems	Erokhin Maxim	Georgiesh Kateryna	**71**
Ukraine	Odesa National University of Technology	Optimization of Air Conditioning Systems Using Dehumidifiers	Vysotenko Denys	Zhykharieva Nataliia	**69**

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Kazakhstan	Almaty Technological University	Improving the Efficiency of Immersion Cooling Systems	Khakimov Shukhrat	Tsoi Alexander	**69**
Bulgaria	South-West University "Neofit Rilski"	Thermal Imaging Inspection of Solar Water Heating Systems	Karaganov Antonio	Batalov Filip	**67**
Ukraine	Odesa National University of Technology	Water Harvesting Methods and Technologies	Kravchenko Volodymyr	Nikitin Dmytro	**61**
Ukraine	Odesa National University of Technology	Energy analysis of the prospects for the use of artificial cold in main gas pipelines	Lupenko Oleksandr	Georgiesh Kateryna	**60**
Ukraine	Odesa State Agrarian University	Universal Hydrodynamic Equipment for Biodiesel Fuel Production Based on Esterification of Components	Yurkovsky Mikhail	Uminsky Sergey, Dudarev Igor	**55**
Ukraine	Vinnytsia National Technical University	The Minimization of Uneven Generation Impact from Renewable Energy Sources in the Power System Balance	Povstianko Oksana	Malohulko Yulia	**55**
Ukraine	National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”	Design of Heating and Ventilation Systems Using a Small Hydropower Unit	Apostol Yaroslav, Olymenko Iryna	Sheleshei Tetiana, Bednarska Inna	**55**
Ukraine	Lviv State University of Life Safety	The Impact of Short Circuit on the Fire Safety of Electrical Installations	Dudnyk Valeriia	Kravets Ihor	**55**
Ukraine	National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”	Perspectives on the Use of Marine Energy Installations	Syvachenko Victoria, Ostrovskyi Anton	Sheleshei Tetiana, Bednarska Inna	**55**