

## International Competition of Student Scientific Works “Black Sea Science 2021”

### Results for the field of “Power Engineering and Energy Efficiency”

Place	Country	Institution	Work Title	Author(s)	Supervisor(s)	Score		
						Stage 1	Stage 2	Total
I	Ukraine	National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”	A result-oriented framework to support the low-carbon transformation of energy services market	Yevtukhova Maria	Deshko Valeriy, Kovalko Oleksandr	93	28	121
I	Ukraine	Chernihiv Polytechnic National University	Increasing the efficiency of an autonomous power supply system based on photoelectric converters	Novyk Kateryna	Stepenko Serhii	83	28	111
II	Ukraine	Odessa National Academy of Food Technologies	Cooled complex for short-term storage of tropical fruits with a solar energy plant	Petushkov Yaroslav, Sharaiev Maksym	Sokolovska-Yefymenko Viktoriia	88	19	107
II	Ukraine	Mykolaiv National Agrarian University Batumi Navigation Teaching University	Determination of indicators of weight and cost of planary single-phase electromagnetic systems with rectangular cross-sections of rods	Sevlisyan Victor, Vakhtin Vladislav	Sadovoy Aleksey, Labartkava Andrei	79	26	105
II	China	Ningbo Institute of Technology	Combined small-scale power installation for generation of the heat electricity and moisture from the air	Zhang Haobo	Volovyk Oleksii	80	24	104
III	Ukraine	Kharkiv Petro Vasylenko National Technical University of Agriculture	Increasing the level of energy efficiency of combined power supply systems	Andrew Yakovenko, Maxim Slavov	Serhii Dudnikov	90	13	103
III	Ukraine	Kyiv International University	Solar panels work and control system modeling in LabVIEW and LTSpice. Comparison of the perspectives of panels using	Drozd Oleksiy	Scherbak Leonid	79	22	101

<b>III</b>	Ukraine	National University «Yuri Kondratyuk Poltava Polytechnic»	Investigation of the influence of thermal modernization of panel residential buildings in Poltava on the humidity condition of panels in the joint zone	Kidenko Vitalii, Mustafa Omer Mussab Musaad, Havrylenko Pavlo	Yurin Oleg, Mahas Nataliia	<b>87</b>	<b>14</b>	<b>101</b>
<b>III</b>	Poland	Kielce University of Technology	Heat and mass transfer in biomass pyrolysis technologies	Gustaw Kot, Agnieszka Jardel	Pavlenko Anatoliy	<b>75</b>	<b>0</b>	<b>75</b>
	Ukraine	Vinnitskiy National Agricultural University	Biogas production as a prospective way towards energy independence of countries	Pronko Anastasiia	Tokarchuk Dina, Pryshliak Natalia	<b>73</b>		
	Russia	Moscow Power Engineering Institute	Wind turbine control system with compensation of wind flow fluctuations and tacking into account shadow effect	Korytchenkova Yelena, Chepiha Andrei	Anuchin Aleksey	<b>70</b>		
	Ukraine	Mykolaiv National Agrarian University	Development of the block diagram of the technological installation and the distiller to ensure the process of water distillation	Taranenko Vladislav, Tolmachev Ivan	Sadovoy Aleksey, Labartkava Andrei	<b>70</b>		
	Ukraine	National Technical University «Kharkiv Polytechnic Institute»	Finding the optimal size of permanent magnets for a transverse magnetic field generator with a disc rotor	Moskalenko Oleksandr	Duniev Oleksii	<b>70</b>		
	Ukraine	Odessa National Academy of Food Technologies	Increasing the energy efficiency of absorption refrigeration machines in systems for obtaining water from atmospheric air	Kravchenko Volodymyr	Vasyliv Oleg, Osadchuk Evgeniy	<b>68</b>		
	Russia	Moscow Power Engineering Institute	Modeling of microgrids based on renewable energy sources and fuel cells	Korytchenkova Yelena, Chepiha Andrei	Nefedkin Sergey	<b>67</b>		
	Ukraine	Mykolaiv National Agrarian University	Development of a complex efficient electric drive based on the adaptive control principle	Churilo Ruslan, Obozny Alexander	Vakhonina Larissa, Labartkava Andrei	<b>66</b>		
	Slovakia	Technical university of Kosice	Ice storage PCM system installation - the innovative heating system with unique solar absorber	Peter Sivak	Ľubomír Beňa	<b>65</b>		

	Brazil	Fluminense Federal University	Analysis of the use of alternative energy sources in microclimate systems for industries	Luis Gustavo Dias	Joao Pedro Simoes	<b>65</b>		
	Canada	Memorial University of Newfoundland	Study of the use of cold accumulation in the transportation of food	Kamal Anthony Miller	Noah Verhoeven Wirth	<b>64</b>		
	China	Harbin Engineering University	Research of efficiency of use of alternative refrigerants in ship refrigeration units	Chenjie Zhu	Zhou Tong	<b>64</b>		
	Ukraine	Odessa National Academy of Food Technologies	Investigation of air conditioning energy efficiency and clean room filtration system by thermoeconomic analysis	Basov Anatolij, Skachko Ivan	Zhykharieva Natalia	<b>63</b>		
	Ukraine	Odessa Technical Vocational College of Odessa National Academy of Food Technologies	Integration of climate equipment into the internet of things (iot) system for hotel business of Odesa	Gavryuk O., Levitsky D.	Burdyuzha Serhii, Berkan Igor	<b>62</b>		
	Ukraine	Odessa Technical Vocational College of Odessa National Academy of Food Technologies	Investigation of heat exchange processes in zonal air conditioning systems	Ponomariov Kyrylo	Kogut Volodymyr, Berkan Igor	<b>62</b>		
	Germany	Technical University of Berlin	Research and improvement of cold storage systems for refrigeration technologies of milk processing plants	Stephan Christoph	Kaan Caliskaner	<b>61</b>		
	Ukraine	Odessa National Academy of Food Technologies	Improving the efficiency of two-channel ship air conditioning systems	Kharitonov Mykyta	Zhykharieva Natalia	<b>60</b>		
	Israel	Ariel University	Analysis of the refrigeration system efficiency using renewable energy sources on natural working bodies for the climatic conditions of Tel Aviv	Shon Zalman Weissman	Sagiv Shalom Yehezkel	<b>60</b>		
	Ukraine	State University of Telecommunications	ENY device, which saves up to 7 % of electricity	Shabelnyk Anastasiia, Yasko Vitalii	Storchak Kamila	<b>58</b>		
	Ukraine	Odessa National Academy of Food Technologies	Research and development of contact type heat exchangers in refrigeration	Keizi Ivan	Morozyuk Larisa	<b>58</b>		

			technique					
	USA	University of Texas Dallas	Research and development of a combined cooling heating and hot water supply system for service enterprises on natural working bodies	Brenden Russell Aaronson	Bryan Reynolds Willis	<b>57</b>		
	Ukraine	Odessa National Academy of Food Technologies	Investigation of units for air separation with excess reverse cycle	Krashunskyi Heorhii	Sokolovska- Yefymenko Viktoriia	<b>57</b>		
	Ukraine	College of Oil and Gas Technology, Engineering and Service Infrastructure of Odessa National Academy of Food Technologies	Improving the energy efficiency of absorption refrigeration appliances	Olar Illia	Gratij Tetiana, Berezovska Liudmyla	<b>56</b>		
	Costa Rica	Universidad Nacional Costa Rica	Investigation of the irrigation chamber operation in the central ship air conditioners	Allan Enzo Cruz Leal	Carlos Hernandez Araya	<b>56</b>		
	Ukraine	Odessa National Academy of Food Technologies	Seasonal heat accumulators in heat and cold supply schemes based on renewable energy sources	Chumachenko Oleksandr	Demianenko Yurii	<b>55</b>		
	Ukraine	Odessa Technical Vocational College of Odessa National Academy of Food Technologies	The latest technologies for dehumidification of swimming pool air	Movchan Vladyslav	Zhykharieva Natalia, Brigadir Liudmyla	<b>54</b>		