

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

### 1<sup>st</sup> stage results for the field of “Ecology and Environmental Protection”

Country	Institution	Work Title	Author(s)	Supervisor(s)	Score
Ukraine Algeria	Odesa National Technological University University Bejaia, Algeria	Ecological assessment of the territorial complexes of Tatarbunaskyi district of Odesa region	Voynyts'ka Iryna	Madani Mariia, Ladjel Mahmud	98
Ukraine Georgia	Lviv Polytechnic National University Akaki Tsereteli State University Iakob Gogebashvili Telavi State University	Treatment of filtrates of landfills by biological method	Malychkovych Khrystyna, Lomanidze Nino, Bekkhan Umarashvili	Malovanyy Myroslav, Magda Davitashvili	97
Georgia	Iakob Gogebashvili Telavi State University	Optimization of anaerobic fertilization parameters of cattle manure with wine-making waste to obtain more biogas yield on typical biogas plants	Bekkhan Umarashvili	Magda Davitashvili	96
Ukraine Germany	Odesa State Environmental University University of Greifswald	Plastic waste as a source of financial aid to the armed forces of Ukraine	Shelinhovskyi Dmytro	Mykhailenko Vladyslav, Kuznichenko Svitlana	95
Ukraine Serbia	Kharkiv National Automobile and Road University EDUCONS University Academy of Professional Studies Šabac	Implementation of green technologies in river transport	Daria Orlova, Oleksiuk Anna, Kristina Manevski	Nataliia Vnukova, Milan Glusic, Nemanja Stošić	94
Ukraine Poland	Zaporizhzhia National University University of Occupational Safety Management in Katowice	Analysis and assessment of ecological safety of emissions from production of carbon products	Koval Vasyl, Olienichenko, Volodymyr	Belokon Karina	93
Ukraine Serbia	Donetsk National Technical University University of Belgrade	Method of disposal of polystyrene dust and wood hydrolysis lignin	Zinchenko Luiza, Bekic Iva	Povzun Oleksii, Lazarevic Dimitar	92

Ukraine Poland	Lviv Polytechnic National University Rzeszow University of Technology	Innovative technologies for the disposal of sediments formed at treatment plants in Ukraine and Poland	Maksymiuk Anastasiia, Krzysztof Dach	Malovanyy Myroslav	<b>91</b>
Ukraine Kazakhstan	Odesa National Technological University Kazakh National Research and Technical University named after K.I. Satbayev	Bioplateuv as a system for improving the water quality of Lake Sayran	Timurova Lyalya, Shmikova Anastasiya	Shevchenko Roman, Katkov Mikhail	<b>90</b>
Ukraine Bulgaria	Lviv Polytechnic National University Technical University – Varna	Analysis of biological methods of wastewater treatment	Danyliuk Maksym, Dilian Georgiev	Ivan Tymchuk,	<b>87</b>
Ukraine Kazakhstan	Kremenchuk Mykhailo Ostrohradskyi National University Kazakh National Research and Technical University named after K.I. Satbayev	Assessment of the ecological state of green spaces in the city of Almaty	Yuzefovych Sophia, Utegenova Aruzhan, Nugmanov Daniyar	Kharlamova Olena, Nurmakova Saule	<b>86</b>
Ukraine	Oles Honchar Dnipro National University	The impact of urban park reconstruction on the aggregate structure of soil	Zots Filip	Kunakh Olga	<b>85</b>
Ukraine India	National University “Yuri Kondratyuk Poltava Polytechnic” Mewat Engineering College	Environmental safety of the oil and gas complex	Tristan Artem, Chaudhar Akhansha	Stepova Lena, Khan Nadeem Ahmad	<b>84</b>
Georgia	Iakob Gogebashvili Telavi State University	Ilto river climate change scenario	Ninaka Berdzenishvili	Nana Berdzenishvili	<b>83</b>
Ukraine	Igor Sikorsky Kyiv Polytechnic Institute	Processing of polymeric and organic waste using solar Energy and liquid nitrogen	Stoliarchuk Yelyzaveta	Kozlenko Oleh	<b>82</b>
Ukraine	Vinnytsia National Agrarian University	The use of by-products of crop production to stabilize the balance of nutrients in the soil	Kryzhanivskyi Vitaly	Tkachuk Oleksandr	<b>81,5</b>
Ukraine Kazakhstan	Kremenchuk Mykhailo Ostrohradskyi National University Kazakh National Research and Technical University named after K.I. Satbayev	Determination of soil radioactivity I effect on the human organism	Sheviakova Daria, Utegenova Aruzhan, Nugmanov Daniyar	Shmandiy Volodymyr, Nurmakova Saule	<b>81</b>
Ukraine	National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”	Post-mining agriculture on waste of mineral origin	Bondarenko Anastasiia	Tverda Oksana	<b>80,5</b>

Ukraine	Zhytomyr Polytechnic State University	Variability of morphometric parameters of <i>Glyceria maxima</i> (c.hartm.) Holmb. pollen as an indicator of radiation contamination of the territory	Novitska Sofiia	Patseva Iryna, Tsyhanenko-Dziubenko Illia	<b>80,2</b>
Ukraine	Lesya Ukrainka Volyn National University	Modern social factors influence on the functional state of the visual system of schoolchildren	Reshotka Daryna, Demchuk Victoriia	Korzhuk Olha, Dmytrotsa Olena	<b>80</b>
Ukraine Moldova	Kharkiv National Automobile and Road University Alecu Russo State University	Imperatives of development of environmentally clean technology in mechanical engineering	Elizaveta Orlova, UlaMin Khatim, Doronina Olga	Hlushkova Diana, Vitaly Beshliu	<b>79,5</b>
Ukraine Serbia	Kharkiv National Automobile and Road University EDUCONS University	The relevance of the transition to modern hybrid vessels of the river fleet of Ukraine, taking into account the experience of the Netherlands	Bessmertna Diana, Onyshchenko Anastasiia, Kristina Manevski	Nataliia Vnukova, Milica Živković	<b>79</b>
Ukraine Serbia	Donetsk National Technical University University of Belgrade	Use of coal industry waste in road construction	Starikov Serhii, Vozarevic Vladimir	Kalynyuchenko Valerii	<b>78</b>
Ukraine Serbia	Donetsk National Technical University University of Belgrade	Binder for strengthening combustion metamorphic rock of slagheap in the pavement base	Bolotskov Lev, Piperski Nicola	Belytskyi, Pavlo	<b>77</b>
Ukraine Poland	Zaporizhzhia National University University of Occupational Safety Management in Katowice	The development of catalytic materials for solving environmental problems of motor vehicles	Vidloha Yana, Ukatu Jude	Belokon Karina	<b>76</b>
Ukraine Poland	Zaporizhzhia National University University of Occupational Safety Management in Katowice	Community Health Risk Assessment from atmospheric air pollution with suspended dust particles	Morozova Dana, Askoldov Valerii	Belokon Karina	<b>75</b>
Ukraine Poland	Lviv Polytechnic National University Rzeszow University of Technology	The biodiversity conservation problems	Vynnyk Roman, Alina Pochwatka	Zoryana Odnorih	<b>74</b>
Ukraine	Lviv Polytechnic National University	Alternate fuel briquettes obtaining from waste of brewery and coffee production	Manastyrska Vladyslava	Ivashchuk Oleksandr	<b>73</b>
Ukraine	Odesa National Technological University	Ecological assessment of the Kura River	Piltsina Margarita	Shevchenko Roman	<b>72</b>
Ukraine Algeria	Odesa National Technological University University Bejaia, Algeria	Environmental assessment of the state of the Tiligul estuary	Shmykova Anastasiya	Madani Mariia, Ladjel Mahmud	<b>71</b>

Ukraine Kazakhstan	Odesa National Technological University Kazakh National Research and Technical University named after K.I. Satbayev	Improving the environmental friendliness of drinking water supply and drainage systems in the city of Odessa	Nadiya Slobodyanuk, Timurova Lyalya	Shevchenko Roman, Katkov Mikhail	<b>70</b>
Ukraine Poland	Mykolaiv National Agrarian University, Academy of Applied Sciences Academy of Management and Administration in Opole	Introduction and Environmental Growing of Medicinal and Essential Oil Crops Using Drip Irrigation in Southern Ukraine	Bahliuk Uliana, Ohiienko Andrii	Kovalenko Oleh, Ohiienko Mykola	<b>69,5</b>
Ukraine	Lviv Polytechnic National University	Modified sono-fenton process for oxidative degradation of chloramphenicol	Lysak Dmytro	Sukhatskyi Yurii	<b>69</b>
Ukraine Poland	Zaporizhzhia National University University of Occupational Safety Management in Katowice	The investigation of the emissions influence from industrial enterprises on pollution of atmospheric air in Zaporizhzhia	Evtushenko Demid, Khrapkin Oleksandr	Belokon Karina	<b>68</b>
Ukraine Serbia	Donetsk National Technical University University of Belgrade	Mathematical modeling of carbon binders modified by polystyrene production waste	Fedorov Andriy, Sekulich Marko	Gogo Volodymyr	<b>67</b>
Ukraine Germany	Odesa State Environmental University Eberswalde University for Sustainable Development	Assessment of pollutant emissions from military activities	Klimov Igor, Hramashchuk Ruslan, Bilenka Vladyslava	Chugai Angelina, Khrutba Viktoriia	<b>66</b>
Ukraine	Vinnytsia National Agrarian University	Green economy as a guarantee of sustainable development	Hadzetska Anastasiia	Tomashuk Inna	<b>65</b>
Ukraine Kazakhstan	Kremenchuk Mykhailo Ostrohradskyi National University Kazakh National Research and Technical University named after K.I. Satbayev	Choice of Methodology for Population Health Risk Analysis with Limited Data	Polyviana Anastasiia, Karimov Alexander, Nugmanov Daniyar	Rigas Tatiana, Nurmakova Saule	<b>64</b>
Ukraine	Mykolayiv National Agrarian University	Effects of pre- and postpubertal body growth rates on the milk production in dairy cattle	Anna Gonchar	Serhii Kramarenko	<b>62</b>
Ukraine	Odesa State Academy of Civil Engineering and Architecture	Concept of green belt applicable to Odesa	Chernytska Anzhelika	Oliinyk Tetiana	<b>61</b>
Ukraine	Odesa State Agrarian University	Wind energy potential of Izmailskyi Odesa region of Ukraine	Chuchui Vyacheslav	Chuchui Valery	<b>60,5</b>
Ukraine	National academy of internal affairs	Russian aggression and its impact on the environment in Ukraine	Zhurova Darya	Volochin Oleksiy	<b>60</b>

Ukraine	National Technical University of Ukraine “Ihor Sikorsky Kyiv Polytechnic Institute”	Comparative analysis of the level of emissions of nitrogen oxides during the combustion of anthracite pillar at different energy installations	Apostol Yaroslav	Sheleshei Tetiana	<b>59</b>
Ukraine Algeria	Odesa National Technological University University Bejaia	Vermicomposting of meat processing industry	Viktoriya Yurenko	Bondar Serhiy, Ladjel Mahmud	<b>58</b>
Ukraine Algeria	Odesa National Technological University University Bejaia	Environmental management on the black sea coast	Iskandarova Liliya	Bondar Serhiy, Ladjel Mahmud	<b>57</b>
Ukraine	Odesa National Technological University	Environmental assessment of agriculture in Odesa region	Lazeba Aleksandr	Shevchenko Roman	<b>56</b>
Ukraine	Odesa National Technological University	Research on the safety and environmental friendliness of babies' clothing	Blidar Alina	Martirosyan Iryna, Garbzhii Kateryna	<b>55</b>
Ukraine	Lviv Polytechnic National University	Electrocoagulation wastewater treatment from nickel ions	Vira Hnativ	Andriy Helesh	<b>54</b>
Ukraine	Lviv Polytechnic National University Department of Physical and Chemistry of Combustible Fossils LM Litvinenko of the National Academy of Sciences of Ukraine	Method of fine post-treatment of dairy effluents using a phenton-like catalyst	Dziadyk Markiyan	Kurylets Oksana, Makido Olena	<b>53</b>
Ukraine Kazakhstan	Kharkiv National Automobile and Road University L.B. Goncharov Kazakh Auto Road Institute	Environmental component of the problem of increasing the durability of piston rings	Onikienko Vladyslav, El Amrani Ayman, Narymkul Aysultan Maratovich	Hlushkova Diana, Murzakhmetova Ul'bala	<b>52</b>
Ukraine Poland	Mykolayiv National Agrarian University University of Agriculture in Krakow	Environmentally safe soil recovery by growing legumes	Rodion Tarabanov, Oleg Kuchera	Valentina Gamajunova	<b>51,5</b>
Ukraine Moldova	Kharkiv National Automobile and Road University Alecu Russo State University	Environmental innovations in industry	Saienko Vladyslav, Mohid Sumiya, Daskal Ion	Hlushkova Diana, Vitaly Beshliu	<b>51</b>
Ukraine Kazakhstan	Kharkiv National Automobile and Road University L.B. Goncharov Kazakh Auto Road Institute	Environmentally safe technology for increasing the durability of hydraulic hammer parts	Vitaly Tunyk, Budshish Zaid, Leonid Kurenkov	Hlushkova Diana, Murzakhmetova Ul'bala	<b>50</b>
Ukraine	Vinnytsia National Agrarian University	Recycled materials as a source of resource saving: the case of Ukraine and the EU	Anastasia Slobodianiuk	Yana Palamarenko	<b>49</b>

Ukraine	Odesa State Environmental University	The agricultural sector of Ukraine as a component of food security	Porokh Mykhailo	Ilina Anna	<b>48</b>
Ukraine	Odesa State Environmental University	Analysis of technogenic impact on the air basin of the Sumy region	Sotnichenko Oleksandr	Chugai Angelina	<b>47</b>
Ukraine	Mykolayiv National Agrarian University	Study of wind resistance of the soils of the steppe of Ukraine	Sybir Tetiana	Pismenniy Oleg	<b>46</b>
Ukraine	Odesa State Academy of Civil Engineering and Architecture	“Green” standards for fitness centers.	Natasha Savchenko	Tatiana Oliinyk	<b>45</b>
Ukraine	Odesa State Academy of Civil Engineering and Architecture	"Green" building and ecology	Tsvihovska Iryna	Oliinyk Tatiana	<b>44</b>
Ukraine	Odesa State Agrarian University	Digestate plus chlorella are important alternative biotechnologies for soils and agricultural production in the conditions of climate change	Markhonos Andrii	Petrenko Svitlana, Valentiuk Nataliia	<b>43</b>
Ukraine	National academy of internal affairs	Peculiarities of earth remote sensing use during the investigation of environmental crimes	Shchur Sofia	Kalynovskyi Oleksandr	<b>41</b>
Ukraine	Separated Structural Subdivision "Odesa Technical Professional College of Odesa National University of Technology"	The pulse of time. An aspect of plastic recycling for inclusive orthopedics	Kolesnikova Kateryna, Kantser Taisia	Lapchak Svitlana, Kuzina Natalia	<b>40</b>
Ukraine	Kharkiv National Air Force University	Proposals regarding the use of modern protection means in the conditions of the influence of corpuscular radiation on the human organism	Bovt Vladislav	Kolmohorov Oleksii	<b>39</b>
Ukraine	O. M. Beketov National University of Urban Economy in Kharkiv	Gamification of environmental education in Ukraine and the world	Khudiakova Mariia	Stalinska Irina	<b>38</b>
Ukraine	Oleksandr Dovzhenko Hlukhiv National Pedagogical University National University of “Kyiv-Mohyla Academy”	Characteristics of public green spaces in Hlukhiv	Andriienko Anna, Bilichenko Anastasiia	Koreneva Inna	<b>37</b>

Ukraine	Kyiv National University of Construction and Architecture	Assessment of heavy metal ion pollution in urbanized areas	Bereznyi Mykhailo, Prokopenko Vladuslav	Zhukova Olena	<b>36</b>
Ukraine	Grygory Skovoroda University in Pereyaslav	Preservation and restoration of the Zminy island ecosystem	Yakovenko Bohdana, Galenko Daryna	Nosachenko Volodymyr	<b>35</b>
Ukraine	Prydniprovsk State Academy of Civil Engineering and Architecture	Influence of individual sources of noise on the psycho-emotional state of a person during war	Leonova Mariia, Chernenko Kateryna	Sankov Petro, Tkach Nataliia	<b>34</b>
Ukraine	Dmytro Motornyi Tavria State Agrotechnological University	Methodology for assessing the environmental properties of mobile machinery	Radko Mykola	Mitkov Vasil	<b>33</b>
Ukraine	Dnipro University of Technology	Measures for the restoration of disturbed lands as a result of military actions	Anchutkina Mariia	Trehub Yuliia	<b>32</b>
Ukraine	Ternopil Ivan Puluj National Technical University	The role of safety culture in environmental protection in the context of Bhopal and Chornobyl disasters lessons	Bodnar Viktoriia, Jadav Hirenkumar	Shchyhelska Halyna	<b>31</b>
Ukraine	Hryhorii Skovoroda Kharkiv National Pedagogical University	Influence of gas-bearing deposits on the ecological state of the territory of Kranograd district of Kharkiv region	Krasnik Sofiia	Koptieva Tetiana	<b>30</b>
Ukraine	Sumy National Agrarian University	Trends in determining the damage caused to the land fund as a result of military actions	Kocherezhchenko Yana, Khomenko Valeriya	Rybina Olena	<b>29</b>
Ukraine	Chernihiv Polytechnic National University	Organization of environmental monitoring of emergency situations using UAVs in wartime conditions	Nahornyi Pavlo	Hnedina Kateryna	<b>28</b>
Ukraine Germany	Kharkiv National Automobile and Road University HTW Berlin – University of Applied Science	Technogenic degradation of plant phytocenoses	Vladyslav Peleshenko, Viacheslav Hoholev, Alexander Hebel	Ganna Zhelnovach, Mirko Barz	<b>27</b>
Ukraine Germany	Kharkiv National Automobile and Road University HTW Berlin – University of Applied Science	Assessment of the impact of the components of the transport complex on the atmospheric air (on the example of the transport enterprise)	Oleksandra Lebed, Yelyzaveta Lub, Felix Schaft	Ganna Zhelnovach, Mirko Barz	<b>26</b>