

Name and surname:	Cezary Kabała
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UPWr Base of Knowledge - link	https://bazawiedzy.upwr.edu.pl/info.seam?id=UPWr6dbdc7326bc44233b7889163e9913a13&affil=&lang=pl
Researchgate:	https://www.researchgate.net/profile/Cezary-Kabala
Personal website / Working group website:	http://karnet.up.wroc.pl/~kabala/
Projects in last 5 years (chronological; with distinction into PI (kierownik) and RF (wykonawca)):	<p>1) Projekt NCN 2014/15/B/ST10/04606 "Origins of mollic-bearing soils on loess areas in the south-west of Poland in the context of environmental change and human expansion in the Holocene"- project leader, duration period: 13-07-2015 - 12-07-2018</p> <p>2) Erasmus+ 2015-1-PL01-KA203-016480 „FACES - Freely Accessible Central European Soil” - partner projektu, okres realizacji: 2015-10-01 to 2018-08-31</p> <p>3) Projekt NCN 2018/29/B/ST10/00610 (in Polish) "Geneza i transformacja gleb czarnoziemnych w Polsce na tle zmian klimatycznych oraz wpływu osadnictwa i aktywności człowieka od początku neolitu” - contractor, duration period: 2018-2022</p> <p>4) Erasmus+ 2019-1-PL01-KA203-065101 „SYSTEM - SHARE YOUR SOILS” - partner in project, duration period: 2019-10-01 to 2022-08-31</p>
Do you plan to engage support of second supervisor or auxiliary supervisor?	YES
Name and surname	Agnieszka Medyńska-Juraszek
Academic Degree	dr inż. (Dr. Eng.)
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UPWr Base of Knowledge - link or most important publications from last 3 year (JCR) / patents from last 3 years (maximum 5):	https://bazawiedzy.upwr.edu.pl/info.seam?id=UPWr6b3165ca644198a581291d02c6b36&affil=&lang=pl
Researchgate:	https://www.researchgate.net/profile/Agnieszka-Medyńska-Juraszek
Personal website / Working group website:	https://upwr.edu.pl/badania/wiodace-zespoly-badawcze/zespol-waloryzacji-odpadow-i-biomasy-wbvg/zespol
Projects in last 5 years (chronological; with distinction into PI (kierownik) and RF (wykonawca)):	<p>1) Inkubator Innowacyjności 4.0, project no B100/0011/20 „ Innovative growing medium from biowastes for herbs and medical plant production” – project leader, duration period: years 2020-2022</p> <p>2) Grant from The National Center of Research and Development from III Applied Sciences Program, project no PBS3/B8/22/15 “Biochar as an innovative growing medium” – project leader, duration period: years 2014-2017</p> <p>3) Grant from National Research Center SONATA 3, project no 2012/05/D/ST10/02223 “Effect of physicochemical properties of soil on pesticides binding with organic matter” – project contractor, duration time: 2013 -2016</p>
Research topic and funding	
1) PhD topic:	Studies on soil microplastics pollution and its role in xenobiotics migration from soil to food chain
2) Research discipline in Doctoral School	Agriculture and Horticulture
3) Short description of the research problem to be solved in the PhD:	<p>The extraordinary expansion of plastic, due to its remarkable utility and versatility caused significant environmental impact. From all types of plastic, microplastic (MP) brings recently a lot of attention of researchers as due to very small size of particles microplastic may interact with wide range of organisms, becoming an “active” part of plastic contamination. Growing evidence suggests that MPs ubiquitously occur in the terrestrial environment. The annual amount of plastic released to the land is estimated to be 4–23 fold larger than the plastics released to the oceans, therefore, both the interactions and the consequences of particulate plastics and trace elements might be higher in terrestrial systems. Large quantities of particulate plastics retained within the marine environment have originated from land-based sources. Despite this link to land-based sources, the majority of scientific research on microplastics has focused on aquatic systems. Soil can act a sink of MPs to waters however fate of plastics in soils undergoes very limited investigations. Microplastic interactions in soil seems to be more complicated compare to water as microplastic can mimic functions of natural soil organic matter. Even if is unlikely that microplastics can be uptaken by plants, a lot of attention should be paid to microplastic as vector of pollutants in soil. Very early investigations on this topic suggest that some of xenobiotics like heavy metals, pesticides or hormones are more bioavailable when MP is present in soil, increasing the risk of contaminants transfer from soil to food chain. The aim of the project is to determine the role of microplastic as a vector of xenobiotics in soil and evaluation of potential environmental and health risk related to food production on soil contaminated with microplastic.</p>
4) Professional skills for PhD candidate (e.g. master program, specializations, softwares, language, analytical techniques):	<p>Expectations:</p> <p>1) Master’s degree in environmental sciences or civil engineering, specialty in soil sciences, soil reclamation and remediation.</p> <p>2) Good English language knowledge enabling work in an international research team and use of English-language scientific sources</p> <p>3) Interest in scientific work and self-motivation skills, creativity</p> <p>4) Ability to work both independently and in a team, good communication skills</p> <p>5) Experience in working in a laboratory (at least during the master’s studies)</p> <p>The additional advantage:</p> <ul style="list-style-type: none"> • experience in the analysis of soil samples (basic physical and chemical properties) • experience in conducting incubation and vegetation experiments, • statistical analysis and interpretation of research results, • knowledge of spectroscopic techniques (FTIR, UV-VIS), microscopy and ICP-OES
5) Details of the project to support PhD research	
a) Project title:	None
b) Agreement number:	None
c) Number of months in the project to support PhD (in months; starting from 1st of October 2021):	0
6) Project website:	