

Candidate supervisor's information summary form

Name and surname, degree, title: dr hab. inż. Robert Popek, prof. SGGW	
Academic discipline/disciplines	Agriculture and Horticulture
Professional development (degrees and titles) in chronological order	2017. Engineer of Horticulture, specialization in plant genetics. 2018. MSc of Horticulture, specialization in agroecology. 14.04.2013. PhD of agricultural sciences in the field horticulture. 07.03.2024. Habilitated PhD in the field of agricultural sciences in the discipline of agriculture and horticulture. 01.03.2025. Associate professor SGGW.
Most important publications/ patents in the last 3 years (maximum 10)	1. Moniuszko H., Przybysz A., Borański M., Splitt A., Jachula J., Popek R. 2025. Buff-tailed bumblebee, an underrated indicator of air pollution: a comparison of particulate matter accumulation by <i>Bombus terrestris</i> L. and <i>Apis mellifera</i> L. <i>Environmental Toxicology and Chemistry</i>, vgae020. 2. Popek R., Roy A., Mandal M., Przybysz A., Drażkiewicz K., Romanowska P., Sarkar A. 2024. Enhancing Urban Sustainability: How Spatial and Height Variability of Roadside Plants Improves Pollution Capture for Greener Cities. <i>Sustainability</i>, 16: 11131. 3. Chatterjee S., Mandal M., Kakkar M., Basak G., Khan N.B., Chakraborty R., Popek R., Sarkar A., Barman C. 2024. An insight to strategical responses of particulate pollution in plants: from phenome to genome. <i>Plant Stress</i>, 14: 1–14. 4. Mandal M., Roy A., Popek R., Sarkar, A. 2024. Micro- and nano- plastic degradation by bacterial enzymes: A solution to 'White Pollution'. <i>The Microbe</i>, 3: 100072. 5. Moniuszko H., Popek R., Nawrocki A., Stankiewicz-Kosyl M., Grylewicz S., Podoba S., Przybysz A. 2024. Urban meadow—a recipe for long-lasting anti-smog land cover. <i>International Journal of Phytoremediation</i>, 26: 1932–1941. 6. Popek R., Przybysz A., Łukowski A., Baranowska M., Bułaj B., Hauke-Kowalska M., Jagiełło R., Korzeniewicz R., Moniuszko H., Robakowski P., Zadworny M., Kowalkowski W. 2024. Shields against pollution: phytoremediation and impact of particulate matter on trees at Wigry National Park, Poland. <i>International Journal of Phytoremediation</i>, 1–14.

	7. Roy A., Mandal M., Przybysz A., Haynes A., Robinson S. A., Sarkar A., Popek R. 2024. Phytoremediating the air down under: Evaluating airborne particulate matter accumulation by 12 plant species in Australia. <i>Ecological Research</i>, 1–12 8. Roy A., Das S., Singh P., Mandal M., Kumar M., Rajlaxmi A., Vijayan N., Awasthi A., Chhetri H., Roy S., Popek R., Sarkar A. 2024. Summer-time monitoring and source apportionment study of both coarse, fine, and ultra-fine particulate pollution in Eastern Himalayan Darjeeling: A hint to health risk during peak tourist season. <i>MAPAN-Journal of Metrology Society of India</i>, 39: 995–1009. 9. Shahrukh S., Baldauf R., Popek R., Moniruzzaman M., Huda M.N., Islam Md.M., Hossain S.A., Hossain M.E. 2024. Removal of airborne particulate matter by evergreen tree species in Dhaka, Bangladesh. <i>Environmental Pollution</i>, 363: 1–13. 10. Tangahu B.V., Przybysz A., Mashudi M., Popek R., Faz M.R.I., Titah H. S.-I., Purwanti I.F., Pismanik M., Mangkoedihardjo S. 2024. Indoor CO₂ phytoremediation using ornamental plants: A case study in Gresik, Indonesia. <i>Ecological Research</i>, 1–13.
Experience in work with doctoral students (defended doctoral dissertations, initiated doctoral procedures) in chronological order	Assistant Promoter – MSc. Elżbieta Dąbrowska PhD in progress, planned defense in 2025. Assistant Promoter – MSc. Adam Nawrocki - PhD in progress, planned defense in 2026. Assistant Promoter – MSc. Zuzanna Zając - PhD in progress, planned defense in 2028.
Achievements in the area of projects/grants (in the last 5 years)	1. Coordinator of the project titled "Phytoremediation of microplastic particulate dust and heavy metals and their impact on vegetation and insects" – within the Sonata 16 NCN program: 07.2021–07.2025.
Subject area of the research project for which the candidate student is being recruited	The thematic scope concerns air phytoremediation, particularly the impact of suspended dust on the condition of plants and their ability to accumulate PM, microplastics, heavy metals, and organic compounds. The research topic also includes the impact of green infrastructure elements on environment in urban areas.
<u>Contact details:</u> Institute E-mail address, Telephone number	Centre for Climate Research SGGW Email: robert_popek@sggw.edu.pl Phone: +48 22 593 20 85, Mobile: +48 787 245 973