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. Gładysz K., Wrochna M., Popek R.:Tracking Particulate Matter Accumulation on Green Roofs: A Study at Warsaw University Library, Air, MDPI, vol. 3, nr 1, 2025, 4, 1-19, DOI:10.3390/air3010004 2. Mandal M., Roy A., Binha S., Popek R., Przybysz A., Koczoń P., Prasad D., Sarkar A.:Waste Dumps as Microplastic Hotspots: A Comparative Investigation at Urban, Suburban, and Rural Areas of Eastern India and Associated Risk Assessment, Environmental Toxicology and Chemistry, vol. 44, 7, 2025, 1869-1882, DOI:10.1093/etojnl/vgaf086 3. Moniuszko H., Przybysz A., Borański M., Splitt A., Jachuła J., Popek R.:Buff-tailed bumblebee, an underrated indicator of air pollution: a comparison of particulate matter accumulation by Bombus terrestris L. and Apis mellifera L., Environmental Toxicology and Chemistry, vol. 44, 2025, 282-293, DOI:10.1093/etojnl/vgae020 4. Moniuszko H., Przybysz A., Połaska W., Popek E., Ropelewska N., Popek R.:Particulate Retention, Transfer and Release by Cut and Potted Christmas Trees, Forests, Multidisciplinary Digital Publishing Institute (MDPI), vol. 17, 2025, 10, DOI:10.3390/f17010010 5. Moniuszko H., Łukowski A., Przybysz A., Nawrocki A., Popek R.:Roadside Noise Barriers as Biodiversity Refuges Under Pressure: The Role of Particulate Matter in Shaping Invertebrate Communities, Land Degradation & Development, vol. 36, 16, 2025, 5613–5627, DOI:10.1002/ldr.70024 6. Pismanik M., Zhang B., Zhou Y., Moniuszko H., Wójcik-Gront E., Popek R., Zhu C., Przybysz A.:Simulated rainfall fails

	to reflect trace element wash-off under natural conditions, International Journal of Phytoremediation, 2025, 1-9, DOI:10.1080/15226514.2025.2592248 7. Popek R., Łukowski A., Roy A., Mandal M., Przybysz A., Zając Z., Sarkar A.:Combined efficiency of tree and shrub vegetation barriers in mitigating PM, TEs, and PAHs along urban roadways, International Journal of Phytoremediation, 2025, 1-9, DOI:10.1080/15226514.2025.2555595 8. Robakowski P., Jagiełło R., Baranowska M., Bułaj B., Dering M., Hauke-Kowalska M., Korzeniewicz R., Łukowski A., Popek R., Przybysz A.:Climate warming, ecological dynamics and nature conservation drive tree diversity in Wigierski National Park, Poland, Dendrobiology, vol. 94, 2025, s. 73-88, DOI:10.12657/denbio.094.005 9. Roy A., Mandal M., Binha S., Prasad D., Popek R., Przybysz A., Sarkar A.:Festive Pollution: A Global Concern—A Comparative Study of Diwali in India and New Year's Eve in Poland, Atmosphere, MDPI, vol. 16, 4, 2025, 442, 1-25, DOI:10.3390/atmos16040442 10. Setiawan G., Przybysz A., Treesubsuntorn C., Popek R.: Effect of simulated rain and rain frequency on particulate matter re-accumulation in roadside climbers Parthenocissus quinquefolia, Environmental Pollution, vol. 382, 2025, 126649, DOI:10.1016/j.envpol.2025.126649
Experience in work with doctoral students (defended doctoral dissertations, initiated doctoral procedures) in chronological order	Assistant Promoter – MSc. Elżbieta Ideka PhD in progress, planned defense in 04.2026. Assistant Promoter – MSc. Adam Nawrocki - PhD in progress, planned defense in 2026. Promoter – MSc. Zuzanna Zając - PhD in progress, planned defense in 2028. Promoter – MSc. Katarzyna Gładysz - PhD in progress, planned defense in 2029.
Achievements in the area of projects/grants (in the last 5 years)	1. Contractor – Paludiculture demonstrators as multi-faceted actions and recommendations for implementation in the European Union, start date: 01-02-2025, end date: 31-07-2029, ongoing. 2. Contractor – Community-driven creation of living spaces in changing landscapes for climate-resilient land management and support of the New European Bauhaus, start date: 01-11-2024, end date: 31-10-2027, ongoing.

	3. Contractor – Project No. W00276. Development of a research plan in the field of agrivoltaics for the Arcus farm in the Pisz municipality, start date: 01-07-2023, end date: 31-10-2023, completed. 4. Coordinator – Air pollution in roadside environments of large cities: Phytoremediation of microplastics, particulate matter and heavy metals, and their impact on vegetation and insects, start date: 23-07-2021, end date: 22-07-2025, completed.
Subject area of the research project for which the candidate student is being recruited	The thematic scope focuses on the phytoremediation of indoor air quality, with particular emphasis on pollution in enclosed environments such as homes, offices, schools, and public buildings. The research examines the impact of particulate matter on plant condition and their ability to accumulate PM, microplastics, heavy metals, and organic compounds under indoor conditions. The project investigates how environmental factors such as ventilation, humidity, temperature, lighting, and human activity influence pollutant levels and plant performance. Comparative analyses conducted in different countries using a unified methodology are included to assess variations in indoor pollutant composition. In addition, the effectiveness of indoor green infrastructure, including potted plants and living walls, in improving air quality and microclimatic conditions is evaluated.
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