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Researchgate:	https://www.researchgate.net/profile/Pawel-Lochynski
Personal website / Working group website:	
Participation in projects in last 5 years (chronological; with distinction into PI (kierownik) and RF (wykonawca)):	<p>2017-2020 "Pioneering model for monitoring contamination of process baths for electropolishing (IonsMonit)". LEADER program, National Centre for Research and Development, (PI)</p> <p>2017-2019 "Nickel plating of brazed copper and brass components and increased process safety", Municipal Program for Supporting Partnership for Higher Education and Science and the Business Activity Sector "Mozart", (GT)</p> <p>2022-2026 "Development of technology for the preparation of a mixture of wastewater of variable composition from metal surface treatment, taking into account the efficiency of the treatment process", Ministry of Science and Higher Education, (Supervisor of the implementation doctorate)</p>
PhD topic:	Rapid detection of contaminants in industrial wastewater
Research discipline in Doctoral School:	Environmental Engineering, Mining and Energy
Short description of the research problem to be solved in the PhD (minimum 1000 characters):	The search for circular economy solutions, sustainable design and pollution reduction efforts, especially in the industrial area, is a technological, environmental and economic challenge. Without previously prepared procedures for action, without a timely diagnosis of the source of the problem, decisions taken too late have limited effectiveness. The goal of the project is to develop a method for the rapid detection of wastewater contaminants from selected technological processes and to develop decision-making procedures related to the management of the wastewater treatment process. The model process wastewater will come from three processes: pickling of stainless steels, electropolishing of stainless steels, and cleaning of copper and brass. In the framework of this project the development of new research areas specializing in the use of detection methods and management for the treatment of galvanic wastewater is planned. A novel approach will be the development of relatively low-cost in operation solutions based on electrochemical, optical and X-ray techniques.
Professional skills for PhD candidate (e.g. master program, specializations, softwares, language, analytical techniques, minimum 500 characters):	Master's degree in environmental engineering, chemistry or a related discipline. Experience in laboratory work (e.g. preparation of model or standard solutions). The candidate should have the ability to process and interpret data obtained from experimental studies and to handle them statistically. Self-discipline, good time organisation and ability to work in a team are welcome. Scientific achievements, including publications or speeches at scientific conferences, knowledge of optical, X-ray and electrochemical methods will be an added advantage. Knowledge of English at a communicative level is essential for studying the literature and writing scientific publications.
a) Project title:	0
b) Agreement number:	0
c) Number of months in the project to support PhD student (in months; starting from 1st of October 2024):	0
Project website:	