

Candidate supervisor's information summary form

Magdalena Michel, PhD, DSc	
Discipline/ disciplines of science	environmental engineering, mining and energy
Professional development (degrees and titles) in chronological order	2019 – DSc in the field of environmental engineering, mining and energy 2008 – PhD in the field of environmental improvement
Most important publications/patens over the last 3 years (maximum 10)	<ul style="list-style-type: none"> • L. Reczek, M. M. Michel, Y. Trach, T. Siwiec, M. Tytkowska-Owerko: The Kinetics of Manganese Sorption on Ukrainian Tuff and Basalt—Order and Diffusion Models Analysis, <i>Minerals</i>, vol. 10, nr 12, 2020, s. 1-15 • M. M. Michel, L. Reczek, D. Papciak, M. Włodarczyk-Makuła, T. Siwiec, Y. Trach 2020: “Mineral Materials Coated with and Consisting of MnO_x—Characteristics and Application of Filter Media for Groundwater Treatment: A Review”. <i>Materials</i> 13(10), 2232 • E. Sočo, D. Papciak, M. Michel 2020: “Novel application of mineral by-products obtained from the combustion of bituminous coal-fly ash in chemical engineering”. <i>Minerals</i> 10(1), 66 • L. Reczek, M. Michel, A. Domozych, T. Siwiec, M. Tytkowska, A. Świątkowski, 2020: “Effect of lead(II) presence on sorption of 4-chlorophenol on synthetic activated carbon”. <i>Desalination and Water Treatment</i> 186, 247-257 • M. M. Michel „Melaphyre aggregates as manganese removal filter beds”, SGGW Publishing, Warsaw 2019, ISBN 978-83-7583-844-2 • Tytkowska M., Michel M. M., Reczek L. and Siwiec T. 2019: Sorption of Ni(II) on surface of bed grains used in iron and manganese removal filters. <i>Water Science & Technology: Water Supply</i> 19(3), 815-822 • Michel M. M., Reczek L., Siwiec T., Rudnicki P. 2018: Treatment of evaporative water from brewer's yeast concentration by Fenton and Fenton-like processes. <i>Archives of Environmental Protection</i> 3, 11-18 • Siwiec T., Reczek L., Michel M. M., Gut B., Hawer-Strojek P., Czajkowska J., Jóźwiakowski K., Gajewska M., Bugajski P. 2018: Correlations between organic pollution indicators in municipal wastewater. <i>Archives of Environmental Protection</i> 4, 50-57
Experience in work with doctoral students (defended doctoral dissertations, doctoral programmes opened)	doctoral dissertation in progress "Nickel adsorption in the processes of iron and manganese removal from groundwater"
Project/grants achievements (from the last 10 years)	<ul style="list-style-type: none"> • „The significance of MnO_x type in removal of manganese from water” NCN project, <i>Miniatura</i> 4, Nr 2020/04/X/ST8/00554, 2020-2021, in progress • „Improving the auto-activation of deposits treating groundwater through the use of melaphyre”, pre-implementation project in "Inkubator

	<p>Innowacyjności+" Programme, No. MNISW/2017/DIR/36/II+,</p> <ul style="list-style-type: none"> • „Application of advanced oxidation processes in the technology of water recovery from industrial wastewater”, internship research project for research workers in enterprises No. UDA-POKL.08.02.01-14-021/12-00, • COST Action ES1403 “New and emerging challenges and opportunities in wastewater reuse – NEREUS” • „The use of advanced oxidation for flowback treatment”, SGGW research project for young scientists No. 505-10-052500-K00333-99 • 8 scientific and technical expertise relating to water and wastewater treatment on order from external entities: municipalities, industrial enterprises (PKN Orlen S.A., Synthos S.A., Döhler), foundations (Greenpeace Polska), • 2 implementation of technological studies at the groundwater treatment plants in Seroczyn and in Roztropna, the implementation in water-sewage management in Döhler industrial plant
<p>Topic – research problem – for which the candidate supervisor seeks a doctoral student</p>	<p>Research topics in the field of technological processes of water and wastewater treatment and issues related to water recovery.</p> <ul style="list-style-type: none"> • the role of manganese dioxide polymorphs in the process of manganese removal from groundwater, • the role of the mineral carrier in the auto-activation of manganese removing filters • determinants of heavy metal and organic compounds desorption from mineral sorbents • water recovery from wastewater in the industrial and service sector in the agglomeration
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