

## Contents

### Volume 199

#### *Part 2\* of the Special issue on the 14th Conference on Micropollutants in Human Environment, 4–6 September 2019, Czestochowa, Poland*

Effectiveness of management of EU funds under the ROPs by municipalities aimed at reducing pollutants in the area of water and sewage management in Poland E. Bień (Poland) .....	1
Impact of a municipal waste landfill reclamation in Poland on groundwater quality based on field test E.H. Grygorczuk-Petersons, J. Wiater (Poland) .....	13
Removal of organic compounds from landfill leachate by Fenton process in combination with acidification, precipitation and lime coagulation J. Leszczyński (Poland) .....	24
Application of a modified Fenton method for landfill leachate treatment – a case study J. Muszyńska, J. Gawdzik, Ł. Bąk, J. Górska, K. Górska, A. Sałata (Poland) .....	33
Kinetics of the organic matter biodegradation in the leachate from a municipal waste landfill P. Biedka (Poland) .....	41
Evaluation of the efficiency of humic substances adsorption on activated carbon in ultrasound assisted process M. Huculak-Mączka, D. Nieweś, M. Braun-Giwerska, K. Hoffmann, J. Hoffmann (Poland) .....	49
Influence of sonication on changes in micro- and macro-elements content and availability of organic matter in stabilized sewage sludge used for agricultural purposes D. Boruszko (Poland) .....	57
Effect of sewage sludge sonication parameters on the content of organic compounds in the supernatant liquid M. Worwag (Poland) .....	66
Dewatering of sewage sludge treated by the combination of ultrasonic field and chemical methods B. Bień, J.D. Bień (Poland) .....	72
Impact of ultrasound treatment on the reduction of wastewater toxicity and synergistic effect of ketoprofen and diclofenac M. Próba, L. Wolny (Poland) .....	79
Evaluation of the removal potential of fulvic acids after ultrasound assisted extraction of humic substances from peat M. Huculak-Mączka (Poland) .....	84
The effect of ultrasonic disintegration on sewage sludge conditioning P. Wolski (Poland) .....	99
Application of energetic willow ( <i>Salix viminalis</i> ) for biosorption of soil contaminated with chloroorganic pesticides K. Ignatowicz (Poland) .....	107
Comparison of microbial activity of selected biopreparations and leachates for composting M. Worwag, I. Zawieja, M. Kowalczyk (Poland) .....	112
The assessment of sewage sludge phytotoxicity changes during the processes of composting and vermicomposting D. Włoka (Poland), A. Rorat (France), M. Kacprzak, M. Smol (Poland) .....	119
Evaluation of the effect of toxicity of biochar used for soil fertilization and its water extract on plants E. Stańczyk-Mazanek (Poland) .....	128
Assessment of physical and chemical pollution of urban agglomeration soils M. Widłak, R. Stoińska, R. Kowalik (Poland) .....	137

\*Part 1 is published in volume 186, May 2020

The effect of biochar on migration of selected heavy metals to soil, waters and plant biomass and physical and chemical properties of soil E. Stańczyk-Mazanek, S. Szwała, M. Włodarczyk-Makuła, U. Kępa (Poland) .....	144
Removal of antibacterial drugs in urban wastewater treatment plants K. Kowalska, E. Felis, A. Gnida, A. Łuczkiewicz, A. Ziemińska-Buczyńska, J. Surmacz-Górská (Poland) .....	152
Analysis of particle size distribution and concentration of suspended solids in stormwater runoffs M. Mrowiec (Poland) .....	159
Occurrence of the pollutant first flush phenomenon on the example of the stormwater sewer system in Kielce – case study J. Górski, K. Górska, Ł. Bąk, A. Sałata, J. Muszyńska, J. Gawdzik (Poland) .....	169
Sediments from storm water drainage system as sorbents of organic pollutants A. Sałata, Ł. Bąk, J. Muszyńska, J. Górski, K. Górska, J. Gawdzik (Poland) .....	179
Effect of coagulant dose and backflush pressure on NOM membrane fouling in inline coagulation-ultrafiltration G. Kamińska (Poland), W. Pronk, J. Traber (Switzerland) .....	188
Removal of trihalomethane (THM) precursors from water during coagulation enhanced by ozonation L. Dąbrowska (Poland) .....	198
Removal of total petroleum hydrocarbons from wastewater and sewage sludge generated in oil separators and evaluation of the process efficiency A. Grobelak, M. Worwag, A. Grosser (Poland) .....	205
Effectiveness of coagulation, sorption, and ion exchange processes in reduction of selected priority substances from surface waters D. Mroczko, I. Zimoch (Poland) .....	212
Organic micro-contaminants removed from water in the nanofiltration process – preliminary research results J. Piekutin (Poland) .....	220
Localization method for water quality monitoring points using chlorine concentration measurements in real water network E. Hołota, B. Kowalska, D. Kowalski (Poland) .....	227
The effect of the water pre-treatment method on the adsorption process in a surface water treatment system M. Wolska, A. Sambor, M. Pawłowska (Poland) .....	234
Impact of artificial infiltration on removal of surfactants in surface water treatment process D. Cierniak, Z. Dymaczewski, J. Jeż-Walkowiak, A. Makała, B. Wyrwas (Poland) .....	241
Total cell count as an alternative to the total number of microorganisms for technological analysis of water treatment processes A. Solipiwo-Pieścik, M. Wolska, A. Sambor (Poland) .....	252
Concentration of chosen organic micropollutants in surface water P. Sobczak, A. Rosińska (Poland) .....	258
Microplastics upstream and downstream dam-reservoirs W. Nocoń, K. Moraczewska-Majkut, E. Wiśniowska (Poland) .....	263
Dynamics of the annual cycle changes in the bioavailable phosphorus forms share in excess sludge E. Bezak-Mazur, R. Stońska, B. Szeląg (Poland) .....	273
The comparative research of leaching tests and the sequential chemical extraction based on the environmental risk assessment by a selected type of waste Cz. Rosik-Dulewska, U. Karwaczyńska, T. Ciesielczuk (Poland) .....	282
Assessment of heavy metals leaching from fly ashes as an indicator of their agricultural use E. Szatyłowicz, M. Krasowska (Poland) .....	288
Risk assessment of soil contamination with heavy metals from sewage sludge and ash after its incineration J. Latońska (Poland) .....	297
Removal of metal ions on activated carbon from aqueous solutions in the presence of nitrilotri(methylphosphonic acid) J. Zieliński, M. Huculak-Mączka, M. Porwał, K. Hoffmann, J. Hoffmann (Poland) .....	307
Assessment of metals content in river bottom sediments near sewage treatment plants M. Skorbiłowicz, E. Skorbiłowicz, J. Tkaczuk (Poland) .....	314
The use of algae to remove zinc and lead from industrial wastewater K. Kipigroch (Poland) .....	323

Influence of treatment efficiency on microbiological and chemical stability of water I. Zimoch, M. Skrzypczak (Poland) .....	331
Estimation of potential health and environmental risk associated with the presence of micropollutants in water intakes located in rural areas E. Wiśniowska, M. Włodarczyk-Makuła, J.R. Rak, B. Tchórzewska-Cieślak (Poland) .....	339
Quantitative analysis of microplastics in wastewater during selected treatment processes K. Moraczewska-Majkut, W. Nocoń, M. Zyguła, E. Wiśniowska (Poland) .....	352
Application of sodium carbonate-hydrogen peroxide for PAHs degradation in real wastewater and evaluation of their toxicity TEQ value J. Kozak, M. Włodarczyk-Makuła (Poland) .....	362
Risk assessment and the effect of chlorination on the content of forms of biodegradable organic carbon in water intended for consumption A. Rosińska, K. Rakocz (Poland) .....	371
Origin and characteristics of fulvic acids – precursors of oxidation and disinfection by-products A.M. Anielak, D. Łomińska-Płatek, M. Kryłów (Poland) .....	380
Influence of medium pressure UV lamp in hot tub water treatment on disinfection by-products concentration A. Włodyka-Bergier, T. Bergier (Poland) .....	387
Comparison of the effectiveness of disinfectants in swimming pool footbaths A. Włodyka-Bergier, T. Bergier, E. Stańkowska (Poland) .....	395
Studies on the nicotine degradation in swimming pool water A. Lempart, E. Kudlek, M. Dudziak (Poland) .....	406
Solid particles and their impact on water meter operation T. Cichorń, J. Królikowska (Poland) .....	415
Capping as in-situ alternative for contaminated sediments A. Popenda (Poland) .....	420
Removal of organic pollutants and surfactants from laundry wastewater in moving bed biofilm reactor technology S. Bering, J. Mazur, K. Tarnowski, M. Janus (Poland) .....	434
Efficiency assessment of coke industry wastewater treatment during advanced oxidation process with biochar adsorption A. Kwarcia-Kozłowska, R. Włodarczyk (Poland) .....	441
Fate of selected emerging contaminants in wastewater treatment systems E. Neczaj (Poland) .....	451
Application of selected detoxifying and antioxidative enzymes of the <i>Tubifex tubifex</i> ( <i>Oligochaeta</i> ) as potential indicators of river sediment contamination A. Arendarczyk, E. Grabińska-Sota (Poland) .....	464
Relationship between selected pollution indicators of stormwater from urban catchments K. Górska, J. Górski, Ł. Bąk, A. Sałata, J. Muszyńska, J. Gawdzik (Poland) .....	473
Use of disinfection by-products (DBPs) generation simulation models in the risk analysis of secondary water contamination I. Zimoch, E. Bartkiewicz (Poland) .....	486
Effect of copper nanoparticles on biological wastewater treatment M. Madeła (Poland) .....	493
Use of water turbidity as an identifier of microbiological contamination in the risk assessment of water consumer health I. Zimoch, J. Paciej (Poland) .....	499
Selected unit processes in microplastics removal from water and wastewater E. Wiśniowska, K. Moraczewska-Majkut, W. Nocoń (Poland) .....	512
Author Index .....	521