
Table of Contents

Phosphorus removal by microelectrolysis and sedimentation in the integrated devices – Bartosz Libeck, Tomasz Mikołajczyk	3
Comparison of sulphonamides decomposition efficiency in ozonation and enzymatic oxidation processes – Natalia Lemańska, Ewa Felis, Marzena Poraj-Kobielska, Zuzanna Gajda-Meissner, Martin Hofrichter	10
DNA vs RNA based studies of nitrogen removal bacteria genes via qPCR – Anna Banach-Wiśniewska, Filip Gamoń, Aleksandra Ziemińska-Buczyńska	19
Removal of cyclohexane and ethanol from air in biotrickling filters inoculated with <i>Candida albicans</i> and <i>Candida subhashii</i> – Piotr Rybarczyk, Milena Marycz, Bartosz Szulczyński, Anna Brillowska-Dąbrowska, Agnieszka Rybarczyk, Jacek Gębicki	26
Influence of Chloride Salinity on Cadmium uptake by <i>Nicotiana tabacum</i> in a Rhizofiltration System – Ulrico Javier Lopez-Chuken, Icela Dagmar Barceló-Quintal, Evangelina Ramirez-Lara, Maria Elena Cantu-Cardenas, Juan Francisco Villarreal-Chiu, Julio Cesar Beltran-Rocha, Claudio Guajardo-Barbosa, Carlos Jesus Castillo-Zacarias, Sergio Gomez-Salazar, Eulogio Orozco-Guareno	35
Characteristics of fulvic acids generated in communes waste landfills – Tomasz Orliński, Anna M. Anielak	41
Removal of Octyl Phenol Ethoxylate (OPE) Using Processed and Unprocessed Industrial Biological Waste Sludge – Ali Rıza Dincer, Ibrahim Feda Aral	53
Estimation of the share of artificial Po-210 contamination in the ambient air – Magdalena Długosz-Lisiecka, Karolina Nowak	61
Spatial distribution of the water exchange through the bottom of the river in a cross-section – measurements and the numerical model – Maria Grodzka-Łukaszewska, Zofia Pawlak, Grzegorz Sinicyn	69
Assessment of the possibility of implementing small retention reservoirs in terms of the need to increase water resources – Mirosław Wiatkowski, Barbara Wiatkowska, Łukasz Gruss, Czesława Rosik-Dulewska, Paweł Tomczyk, Dawid Chłopek	80
Stress proteins concentration in caged <i>Cyprinus carpio</i> as a tool to monitor ecological stability in a model dam reservoir – Agnieszka Babczyńska, Monika Tarnawska, Piotr Łaszczyca, Paweł Migula, Bartosz Łozowski, Andrzej Woźnica, Ilgiz Imnazarow, Maria Augustyniak	101

Table of Contents

Effective removal of odors from air with polymer nonwoven structures doped by porous materials to use in respiratory protective devices – Agnieszka Brochocka, Aleksandra Nowak, Rafał Panek, Paweł Kozikowski, Wojciech Franus	3
Preliminary studies on odor removal in the adsorption process on biochars produced from sewage sludge and beekeeping waste – Jacek Piekarski, Tomasz Dąbrowski, Janusz Dąbrowski, Katarzyna Ignatowicz	20
Impact of the heated water discharge on the water quality in a shallow lowland dam reservoir – Jerzy Mazierski, Maciej Kostecki	29
Application of MoO_3 as an efficient catalyst for wet air oxidation treatment of pharmaceutical wastewater (Experimental and DFT study) – Chen Chen, Ting Cheng, Lei Wang, Yuan Tian, Qin Deng, Yisu Shi	47
Influence of former industrial waste landfill in central Poland on PCBs content in the environment – Marta Gabryszewska, Barbara Gworek	61
Concepts of energy use of municipal solid waste – Arkadiusz Primus, Tadeusz Chmielniak, Czesława Rosik-Dulewska	70
Heavy metal content in used engine oils depending on engine type and oil change interval – Joanna Szyszlak-Bargłowicz, Grzegorz Zajac, Artur Wolak	81
Physical and soil water properties of technosols developed from lignite fly ash – Zbigniew Kaczmarek, Agnieszka Mocek-Plóćiniak, Piotr Gajewski, Łukasz Mendyk, Jan Bocianowski	95
Analysis of emission abatement scenario to improve urban air quality – Piotr Holnicki, Andrzej Kałuszek, Zbigniew Nahorski	103
A new anthropogenic lake Kuźnica Warężyńska - thermal and oxygen conditions after 14 years of exploitation in terms of protection and restoration – Maciej Kostecki	115

Table of Contents

New generation of semipermeable membranes with carbon nanotubes for water and wastewater treatment: Critical review – Michał Bodzek, Krystyna Konieczny, Anna Kwiecińska-Mydlak	3
Biosorption of Pb(II) by the resistant <i>Enerobacter</i> sp.: Investigated by kinetics, equilibrium and thermodynamic – Lei Liu, Mengya Xia, Jianwen Hao, Haoxi Xu, Wencheng Song	28
The application of different methods for indirect microbial development assessment in pilot scale drinking water biofilters – Dorota Holc, Beata Mądrecka-Witkowska, Małgorzata Komorowska-Kaufman, Elżbieta Szeląg-Wasielewska, Alina Pruss, Zefiryn Cybulski	37
Investigation of the process of adsorption of heavy metals in coastal sands containing micro-plastics, with special attention to the effect of aging process and bacterial spread in micro-plastics – Sara Seyfi, Homayoun Katibeh, Monireh Heshami	50
The use of extraction methods to assess the immobilization of metals in hardening slurries – Paweł Falaciński, Małgorzata Wojtkowska	60
Time-delayed effect of petroleum-derived products in soil and their bioremediation on plant – herbivore interaction – Milena Rusin, Janina Gospodarek, Aleksandra Nadgórska-Socha	71
The use of geothermal energy in co-generated heat and power production in Poland – a case study – Tomasz Maciej Mróz, Weronika Grabowska	82
Sensory characteristics analysis for typical odour emission sources in China – Fengyue Yan, Weifang Li, Gen Wang, Jing Geng, Zhiqiang Lu, Zengxiu Zhai, Yan Zhang	92
Prediction of PM_{2.5} hourly concentrations in Beijing based on machine learning algorithm and ground-based LiDAR – Zhiyuan Fang, Hao Yang, Cheng Li, Liangliang Cheng, Ming Zhao, Chenbo Xie	98
Operational determinants of gaseous air pollutants emissions from coal-fired district heating sources – Ryszard Zwierzchowski, Ewelina Różycka-Wrońska	108

Table of Contents

The use of <i>Allium cepa</i> L. assay as bioindicator for the investigation of genotoxic effects of industrial waste water – Pinar Goc Rasgele	3
Morphology analysis and microbial diversity in novel anaerobic baffled reactor treating recycled paper mill wastewater – Haider M. Zwain, Basim Khalil Nile, Tahereh Jafary, Irvan Dahlan	9
Research on neutralization of wastewater from pickling and electropolishing processes – Paweł Lochyński, Paweł Wiercik, Sylwia Charazińska, Maciej Ostrowski	18
Experimental investigations of dynamic sorption of diesel from contaminated water – Dainius Paliulis	30
How we can disrupt ecosystem of urban lakes – pollutants of bottom sediment in two shallow water bodies – Jolanta Katarzyna Grochowska, Renata Tandyrak, Renata Augustyniak, Michał Łopata, Dariusz Popielarczyk, Tomasz Templin	40
Microbial and chemical quality assessment of the small rivers entering the South Baltic. Part I: Case study on the watercourses in the Baltic Sea catchment area – Emilia Bączkowska, Agnieszka Kalinowska, Oskar Ronda, Katarzyna Jankowska, Rafał Bray, Bartosz Płóciennik, Żaneta Polkowska	55
The effect of temperature on the biodegradation of different types of packaging materials under test conditions – Joanna Poluszyńska, Tomasz Ciesielczuk, Marcin Biernacki, Maciej Paciorkowski	74
Application of EASEWASTE model for assessing environmental impacts from solid waste landfilling – Asifa Alam, Muhammad Nawaz Chaudhry, Sajid Rashid Ahmad, Aadila Batool, Adeel Mahmood, Huda Ahmad Al-Ghamdi	84
Promising method of ion exchange separation of anions before reverse osmosis – Inna Trus, Mukola Gomelya, Viktoria Vorobyova, Margarita Skiba	93
Nanofiltration usage for fluoride removal in the sodium chloride presence – Martyna Grzegorzek	98
The use of alternative fuels in the cement industry as a part of circular economy – Alicja Uliasz-Bocheńczyk, Jan Deja, Eugeniusz Mokrzycki	109