

## Contents

### Volume 214

Effect of processing agents on production of ion exchange membranes E. Stránská, J. Praus, K. Janegová (Czech Republic) .....	1
Removal of nitrate and bromate ions from water in processes with ion-exchange membranes J.A. Wiśniewski, M. Kabsch-Korbutowicz (Poland) .....	8
Influence of inorganic fillers on the degradation of polypropylene membranes during membrane distillation M. Gryta (Poland) .....	16
Fouling modeling in the ultrafiltration separation of oil emulsion from salty water E. Tomczak, W. Kaminski, K. Cwirko (Poland) .....	31
Evaluation of wastewater reuse in commercial laundries: a pilot field study I. Kogut (Germany), M. Szwast (Poland), S. Hussy (Germany), D. Polak (Poland), A. Gerhardt (Germany), W. Piątkiewicz (Poland) .....	39
Development of graphene oxide-coated membranes to support the process of removing pharmacological agents from water D. Polak, I. Tonecka, W. Fabianowski, M. Szwast (Poland) .....	49
Cadmium(II) and lead(II) extraction and transport through polymer inclusion membranes with 1-alkylimidazole E. Radzymińska-Lenarcik, I. Pyszka, W. Urbaniak (Poland) .....	56
The influence of surfactant Pluronic P123 addition on the mixed matrix membrane PEBAX® 2533 – ZIF-8 separation properties D. Polak, J. Sułkowska, M. Szwast (Poland) .....	64
Separation of carboxylic acids from post-fermentation broth obtained in bioconversion of waste raw materials using multi-stage membrane systems. A mini review M. Szczygiełda, B. Konopczyńska, A. Andrzejewski, K. Prochaska (Poland) .....	74
Polyethersulfone-co-polyesters blend ultrafiltration membranes for biomedical and biotechnological applications. Preliminary study A. Chwojnowski, C. Wojciechowski, M. Wasyleczko, E. Łukowska, T. Kobiela, P. Dobrzański, M. Pastusiak, A. Smola-Dmochowska (Poland) .....	86
Multi-response factorial design optimisation of organic acid separation process using electrodialysis with bipolar membrane A. Andrzejewski, M. Szczygiełda, K. Prochaska (Poland) .....	95
Application of Lewis analogy to estimate of the heat and mass transfer in membrane distillation W. Kaminski, E. Tomczak, B. Opara, M. Tylman (Poland) .....	107
Influence of hydrolysis, solvent and PVP addition on the porosity of PSF/PUR blend partly degradable hollow fiber membranes evaluated using the MeMoExplorer software W. Sikorska, M. Przytulska, M. Wasyleczko, C. Wojciechowski, J.L. Kulikowski, A. Chwojnowski (Poland) .....	114
Regeneration methods of the ultrafiltration membranes applied in coke oven wastewater treatment A. Trusek, M. Wajsprych, M. Tyrka, A. Noworyta (Poland) .....	120
Whey management based on bioreactor and membrane processes: clean technology gaining valuable components of whey M. Lech, A. Trusek (Poland) .....	128
Nanoencapsulation of neuronal cells for cryopreservation purposes A. Grzeczkowicz, A. Kwiatkowska, M. Drabik, L. Granicka (Poland) .....	135
Polymer membranes from polyvinylidene fluoride or cellulose acetate improved graphene oxide used in the UF process E. Tomczak, M. Blus (Poland) .....	146

Nanomaterials in membrane water desalination M. Bodzek, K. Konieczny (Poland) .....	155
Polyester membranes as 3D scaffolds for cell culture M. Wasyłeczko, W. Sikorska, M. Przytulska, J. Dulnik, A. Chwojnowski (Poland) .....	181
The comparison of the removal of copper(II) and zinc(II) ions from aqueous solution using 2,6-diaminopyridine in a polymer inclusion membrane and in a classic solvent extraction D. Bożejewicz, K. Witt, M.A. Kaczorowska (Poland) .....	194
Optimisation of lactic bio-acid separation from actual post-fermentation broth using nanofiltration process and fouling analysis A. Andrzejewski, M. Szczygiełda, K. Prochaska (Poland) .....	203
Treatment of municipal waste biogas plant digestate using physico-chemical and membrane processes A. Urbanowska, I. Polowczyk, M. Kabsch-Korbutowicz (Poland) .....	214
Potentiometric sensor with lipid-polymer membranes for quality assessment of French red wines E. Brodnicka, M. Szpakowska (Poland) .....	224
Sequential process: membrane filtration and ion exchange as an effective method for water solution purification containing cationic surfactants A. Klimonda, I. Kowalska (Poland) .....	232
Influence of current density on fluoride removal using batch electrodialysis M. Grzegorzek, K. Majewska-Nowak (Poland) .....	242
Removal of microplastics from industrial wastewater utilizing an ultrafiltration composite membrane rGO/PAN application B. Fryczkowska, L. Przywara (Poland) .....	252
Relationship between the addition of carbon nanotubes and cut-off of ultrafiltration membranes and their effect on retention of microcontaminants M. Adamczak, G. Kamińska, J. Bohdzieiewicz (Poland) .....	263
Influence of the procedure of casting solution preparation on the antimicrobial properties of polyethersulfone membranes modified with titanate nanotubes S. Mozia, P. Sienkiewicz, K. Szymański, D. Darowna, A. Czyżewski, M. Zgrzebnicki (Poland) .....	273
Energy efficiency of polyimide membrane modules for air separation in zero-emission power plants: a computational analysis G. Wiciak, K. Grzywnowicz, L. Remiorz, K. Janusz-Szymańska (Poland) .....	286
Energy consumption in membrane capacitive deionization and electrodialysis of low salinity water K. Mitko, A.R. Rosiński, M. Turek (Poland) .....	294
Investigations on ultrafiltration polyethersulfone membranes modified with titanate nanotubes of various characteristics K. Szymański, D. Darowna, A. Czyżewski, P. Sienkiewicz, S. Mozia (Poland) .....	302
Mathematical modeling of scaling-free membrane module by combining residence time distribution, metastability, and induction time M. Turek, K. Piotrowski, P. Dydo, K. Mitko, E. Bernacka, A. Jakóbik-Kolon (Poland) .....	312
A detailed analysis of the influence of selected process parameters on the desalination of geothermal water using NF/RO membranes M. Tyszer, B. Tomaszewska (Poland) .....	321
Theoretical and experimental investigations on single slope solar still K.M. Bataineh, M. Abu Abbas (Jordan) .....	338
Structural optimization of the low-pressure Venturi injector with double suction ports based on computational fluid dynamics and orthogonal test Lei Zhang, Zhengying Wei, Qian Zhang (China) .....	347
Determination of anaerobic ammonium oxidation (anammox) bacteria in the domestic wastewater T. Arumugham, N.A. Husaini, N. Abdullah, I. Koji, S.E. Mohamad (Malaysia) .....	355
Biosorption of some pharmaceutical compounds from aqueous medium by <i>Luffa cylindrica</i> fibers: application of the linear form of the Redlich-Peterson isotherm equation A. Aloui, N. Bouziane, H. Bendjeffal, Y. Bouhedja, A. Zertal (Algeria) .....	367
A glimpse into the microbial fuel cells for wastewater treatment with energy generation A.A. Yaqoob, M.N.M. Ibrahim, K. Umar (Malaysia), T. Parveen (India), A. Ahmad (Malaysia, South Africa), D. Lokhat (South Africa), S.H.M. Setapar (Malaysia) .....	379
Trophic state assessment based on summer phytoplankton community structure and trophic indices: a small tectonic lake in Turkey B. Taş (Turkey) .....	390

Different forms of phosphorous transformation and release prediction with environment factor in sediments from Lake Dongting, China Fangxin Chen, Shaoyong Lu, Yang Deng, Chuanping Feng, Nan Chen, Huaming Guo (China) .....	402
Contribution of photocatalysis for the elimination of Methyl Orange (MO) in aqueous medium using TiO <sub>2</sub> catalyst, optimization of the parameters and kinetics modeling M. Abbas, M. Trari (Algeria) .....	413
Kinetic, isotherm, and thermodynamic studies of Reactive Orange 13 adsorption onto activated carbon obtained from orange pulp S. Güneş, D. Angın (Turkey) .....	420
Adsorption of Cs-137 and Am-241 ions from aqueous solutions on bentonites A. Oszczak-Nowińska, A. Świątkowski, J. Fronczyk, L. Fuks (Poland) .....	433
Synthesis and characterization of low-cost carbon nanotubes by chemical vapor deposition for aluminum removal from aqueous solution A.O. Basheer, M.M. Hanafiah (Malaysia), M.A. Alsaadi (Malaysia, Oman), W.Z.W. Yaacob (Malaysia), Y. Al-Douri (Malaysia, Turkey), A. Bouhemadou (Algeria) .....	440
Author Index .....	452
Corrigendum to "Photodegradation of mefenamic acid from wastewater in a continuous flow solar falling film reactor" published in vol. 210 (2021) pp. 22-30 (doi:10.5004/dwt.2021.26581) Z.Y. Shanian, M.F. Abid, K.A. Sukkar (Iraq) .....	453
Corrigendum to "A potentially low-cost adsorbent for methylene blue removal from synthetic wastewater" published in vol. 213 (2021) 431-440 (doi:10.5004/dwt.2021.26732) H.A. Al-Aoh, M.M.H. Aljohani (Saudi Arabia), A.A.A. Darwish (Saudi Arabia, Yemen), M.A. Ahmad, S.A. Bani-Atta, M.A. Alsharif, Y.M. Mahrous, S.K. Mustafa, H.S. Al-Shehri (Saudi Arabia), L.R. Alrawashdeh (Jordan), J.N. Al-Tweher (Saudi Arabia) .....	454