

PROGRAM
XII Konferencji Naukowej
„Membrany i Procesy Membranowe
w Ochronie Środowiska”
MEMPEP 2018
Zakopane, 13 – 16 czerwca 2018 r.

PROGRAMME
12th Scientific Conference
„Membranes and Membrane Processes
in Environmental Protection”
MEMPEP 2018
June 13 – 16, 2018, Zakopane (Poland)

13.06.2018, ŚRODA / WEDNESDAY

15⁰⁰ – 22⁰⁰ PRZYJMOWANIE UCZESTNIKÓW / RECEPTION OF PARTICIPANTS
18⁰⁰ - 22⁰⁰ KOLACJA / SUPPER

14.06.2018, CZWARTEK / THURSDAY

8⁰⁰-9⁰⁰ **ŚNIADANIE / BREAKFAST**

9⁰⁰-9⁰⁵ **OTWARCIE KONFERENCJI / OPENING OF THE CONFERENCE**

Sesji przewodniczą / Chairpersons:

Professor KRYSZYNA PROCHASKA

Professor WŁADYSŁAW KAMIŃSKI

9⁰⁵-9²⁰ NALAN KABAY, MERT CAN HACIFAZLIOĞLU, İLKER PARLAR, NASIM JALILNEJAD FALIZI, TAYLAN Ö. PEK, MITHAT YÜKSEL
Wastewater reclamation and desalination by membrane processes to produce water for agricultural irrigation and industrial reuse

9²⁰-9³⁵ JAN BARTOŃ, MIROSLAV STRNAD
Presentation of MEGA Group

9³⁵-9⁵⁰ ELWIRA TOMCZAK, MARTYNA BLUS
Preparation and permeability of PVDF membranes functionalized with graphene oxide

9⁵⁰-10⁰⁵ EWELINA CHRZANOWSKA, MAGDALENA GIERSEWSKA, WOJCIECH KUJAWSKI
Pervaporation dehydration of alcohol by polyamide-6/chitosan/clay and polysulfone/chitosan/clay composite membranes

10⁰⁵-10²⁰ KATARZYNA CZYŻEWSKA, ANNA TRUSEK-HOŁOWNIA
*Catalytic membrane with the recombinant catalase from psychrotolerant bacteria *Serratia* sp. in dairy applications*

10²⁰-10³⁵ KATARZYNA KNOZOWSKA, JOANNA KUJAWA, WOJCIECH KUJAWSKI
Composite membranes based on PDMS and PEBA applied in pervaporative separation of binary organic mixtures

10³⁵-11⁰⁵ **PRZERWA / COFFEE BREAK**

Sesji przewodniczą / Chairpersons:

Professor MARIA TOMASZEWSKA

Professor WOJCIECH KUJAWSKI

11⁰⁵-11²⁰ ANNA SIEKIERKA, MAREK BRYJAK
Hybrid Capacitive Deionization for selective capturing of lithium ions from aqueous solutions

11²⁰-11³⁵ PAULINA SIENKIEWICZ, DOMINIKA DAROWNA, MANU JOSE, MICHAŁ ZGRZEBNICKI, AGATA MARKOWSKA-SZCZUPAK, SYLWIA MOZIA
Influence of MgO nanoparticles on the transport and antibacterial properties of polyethersulfone membranes

11³⁵-11⁵⁰ ANNA KOWALIK-KLIMCZAK, EWA STANISŁAWEK, JOANNA KACPRZYŃSKA-GOŁACKA, EDYTA OSUCH-SŁOMKA, ANITA BEDNARSKA, JAROSŁAW SKOWROŃSKI
The polyamide membranes functionalized by nanoparticles for biofouling control

11⁵⁰-12⁰⁵ MATEUSZ SZCZYGIĘDA, KRYSZYNA PROCHASKA
Recovery of alpha-ketoglutaric acid from multi-component model solutions: impact of initial composition of dilute solution on the efficiency of the EDBM process

12⁰⁵-12²⁰ BARBARA TOMASZEWSKA, MAGDALENA TYSZER, MICHAŁ BODZEK, MARIOLA RAJCA,
The concept of multi-variant use of geothermal water concentrates

12²⁰-12³⁵ BART VAN DER BRUGGEN, XIN LI
In situ preparative strategy for novel nano-enhanced membrane with improved antifouling performance

12³⁵-13⁴⁵ **Jubileusz 70-lecia urodzin prof. dr hab. inż. Krystyny Konieczny**
The 70th Anniversary of Professor Krystyna Konieczny's Birthday

13⁴⁵-14⁰⁰ **ZDJĘCIE KONFERENCYJNE / CONFERENCE PHOTO**

14⁰⁰-15⁰⁰ **OBIAD / LUNCH**

15⁰⁰-17⁰⁰ **SESJA POSTEROWA / POSTER SESSION**

18⁰⁰ **OGNISKO / BONFIRE (BARBECUE)**

15.06.2018, PIĄTEK / FRIDAY

8⁰⁰-9⁰⁰ ŚNIADANIE / BREAKFAST

Sesji przewodniczą / Chairpersons:

Professor NALAN KABAY

Professor MAREK BRYJAK

9⁰⁰-9¹⁵

PETER M. HUCK

Investigating biofiltration as a 'green' and sustainable pre-treatment to reduce membrane fouling

9¹⁵-9³⁰

TAO LI, BO WANG, MOHAMAD FAIRUS RABUNI, KANG LI

Micro-monolith membranes for solid oxide fuel cell (SOFC): simultaneous greenhouse gas treatment and clean energy generation

9³⁰-9⁴⁵

TATIANA PLISKO, ALEXANDR BILDYUKEVICH

Modification of polysulfone hollow fiber membranes via addition of hydrophilic polymers to the bore fluid

9⁴⁵-10⁰⁰

MAŁGORZATA PRZYTUŁSKA, JULIUSZ KULIKOWSKI, MONIKA WASYLECZKO,

ANDRZEJ CHWOJNOWSKI, DARIUSZ PIĘTKA

Evaluation of 3D morphological structure of porous membranes based on computer-aided analysis of their 2D images

10⁰⁰-10¹⁵

SYLWIA MOZIA, MANU JOSE, PAULINA SIENKIEWICZ, KACPER SZYMAŃSKI,

DOMINIKA DAROWNA, MICHAŁ ZGRZEBNICKI, AGATA MARKOWSKA-SZCZUPAK

Investigations on the performance of polyethersulfone ultrafiltration membranes modified with Ag/titanate nanotubes

10¹⁵-10³⁰

AGNIESZKA MIŚKIEWICZ, GRAŻYNA ZAKRZEWSKA-KOŁTUNIEWICZ

Investigation of membrane fouling with the application of radiotracers

10³⁰-11⁰⁰

PRZERWA / COFFEE BREAK

Sesji przewodniczą / Chairpersons:

Professor SYLWIA MOZIA

Professor ANDRZEJ CHWOJNOWSKI

11⁰⁰-11¹⁵

WOJCIECH KUJAWSKI, ANNA KUJAWSKA, KATARZYNA KNOZOWSKA, MARCIN CICHOSZ, JOANNA KUJAWA

TANGO PVABE project (NCN/NCBR) – implementation of membrane techniques in the process of butanol production using fermentation method

11¹⁵-11³⁰

JOANNA KUJAWA, WOJCIECH KUJAWSKI, ALEKSANDRA CYGANIUK, SAMER AL-GHARABLI

Properties of hydrophobized zirconia membranes in vacuum membrane distillation

11³⁰-12³⁰

ROZSTRZYGNIECIE KONKURSU DLA MŁODYCH NAUKOWCÓW

THE RESULTS OF THE COMPETITION FOR YOUNG SCIENTISTS

12³⁰-13³⁰

OBIAD / LUNCH

13⁴⁵-18⁰⁰

WYCIECZKA / EXCURSION

19⁰⁰

UROCZYSTA KOLACJA (w przerwie, o godz. 20.00, występ aktorów *Bielskiej Piwnicy Artystycznej im. Marii Koterbskiej*) / **CONFERENCE DINNER** (at 8 p.m. – the performance of *Maria Koterbska Artistic Cellar from Bielsko-Biała*)

16.06.2018, SOBOTA / SATURDAY

8⁰⁰-9⁰⁰ ŚNIADANIE / BREAKFAST

Sesji przewodniczą / Chairpersons:

Professor MAŁGORZATA KABSCH-KORBUTOWICZ

Professor MAREK GRYTA

9⁰⁰-9¹⁵ EWA MARJAŃSKA, MARIA SZPAKOWSKA

All solid state electrodes taste sensor with modified polymer membranes for discrimination of mineral water with different CO₂ saturation

9¹⁵-9³⁰ MARIAN TUREK, DANIEL GIERZKIEWICZ, EWA LASKOWSKA, MAREK SŁOWIK, KRZYSZTOF MITKO, PIOTR DYDO

Required membrane length in electrodynamic desalination of river water

9³⁰-9⁴⁵ ANNA TRUSEK-HOŁOWNIA

Właściwości membran wpływające na transport leków z nośników rdzeń-powłoka

9⁴⁵-10⁰⁰ GRZEGORZ WICIAK

Wpływ zawartości wilgoci w mieszaninie gazowej CO₂/N₂ na wybrane parametry separacji CO₂ membrany polimerowej kapilarnej

10⁰⁰-10¹⁵ TOMASZ CICHON, JADWIGA KRÓLIKOWSKA

Ochrona zasobów wodnych w myśl zrównoważonego rozwoju

10¹⁵-10²⁰ ZAKOŃCZENIE KONFERENCJI / CLOSING OF THE CONFERENCE

11⁰⁰-12⁰⁰ OBIAD / LUNCH

SESJA POSTEROWA / POSTER SESSION

Czwartek / Thursday, 14.06.2018, 15⁰⁰-17⁰⁰

1. ELIŠKA STRÁNSKÁ, KRISTÝNA WEINERTOVÁ, DAVID NEDĚLA
Regeneration and long-term chemical stability of heterogeneous anion exchange membrane in perchloric acid
2. WIOLETA SIKORSKA, CEZARY WOJCIECHOWSKI, MAŁGORZATA PRZYTUŁSKA, GABRIEL ROKICKI, MONIKA WASYLECZKO, JULIUSZ LECH KILIKOWSKI, ANDRZEJ CHWOJNOWSKI
Polysulfone-polyurethane (PSf-PUR) blend partly degradable hollow fiber membranes: preparation, characterization and computer image analysis
3. MARCIN GRZECZKOWICZ, DOROTA LEWIŃSKA
Study of transport properties of partly biodegradable spherical membranes using vitamin B₁₂ as marker
4. MAGDALENA ANTOSIAK-IWAŃSKA, EWA GODLEWSKA, BEATA KAZIMIERCZAK, JOANNA KINASIEWICZ, LUDOMIRA GRANICKA
The membrane composite scaffolds with antithrombotic features for adherent cells culture
5. MAGDALENA LECH, ANNA TRUSEK-HOŁOWNIA, IZABELA GALLUS
Experimental research of biofouling on ceramic microfiltration membranes
6. ANNA TRUSEK-HOŁOWNIA, ŁUKASZ JANCZEWSKI, MICHAŁ HAŁOŃ
*Application of *Saccharomyces cerevisiae* in two chamber microbial fuel cell*
7. ANNA KWARCIAK-KOZŁOWSKA, MONIKA GAŁWA-WIDERA, JANUARY BIEŃ
Influence of temperature on treatment efficiency and effluent toxicity in methane fermentation associated with pressure membrane techniques on meat industry wastewater
8. MICHAŁ ADAMCZAK, GABRIELA KAMIŃSKA, JOLANTA BOHDZIEWICZ
Ultrafiltration of caffeine on TFC/TFN membranes – effect of interfacial polymerization and nanotubes addition
9. BEATA FRYCZKOWSKA
Application of ultrafiltration composite GO/PAN membranes for removing dyes from textile wastewater
10. KACPER SZYMAŃSKI, PAULINA SIENKIEWICZ, DOMINIKA DAROWNA, MANU JOSE, SYLWIA MOZIA
Investigation on antifouling properties of polyethersulfone membranes modified with Fe₃O₄ – trisodium citrate nanoparticles
11. MARTYNA GRZEGORZEK, KATARZYNA MAJEWSKA-NOWAK
Fluoride removal from aqueous solutions with the use of electrodialysis with mono-valent permselective anion-exchange membranes
12. DOROTA BABILAS, PIOTR DYDO
The influence of pH and current density on the selective zinc ions recovery by electrodialysis enhanced with complex formation
13. HANNA JAROSZEK, WOJCIECH MIKOŁAJCZAK, MARIUSZ NOWAK
On the use of membrane separation techniques in synthesis of water miscible ionic liquids
14. JERZY ANT CZAK, MATEUSZ SZCZYGIELDA, KRYSZYNA PROCHASKA
Membrane separation of components of model and real post-fermentation broth
15. MAREK GRYTA
The effect of unfavourable process conditions on the course of water desalination by membrane distillation
16. STANISŁAW KOTER, JULIA SZCZERBIŃSKA, JOANNA KUJAWA, WOJCIECH KUJAWSKI
Water flow in the air gap membrane distillation – comparison of theory with experiment
17. STANISŁAW KOTER, VERONICA IONELA FOAMETE, MIRELA ALINA CONSTANTIN, IZABELA KOTER
Reverse osmosis of ammonium and sodium salt solutions and its model description

18. DANIELA SZANIAWSKA, URSZULA GABRIEL-PÓLROLNICZAK, MICHAŁ KRAMARCZYK
Multistage ultrafiltration treatment of brine from fish processing in the aspect of regeneration and reuse in production cycle
19. EWA LASKOWSKA, MARIAN TUREK, KRZYSZTOF MITKO, PIOTR DYDO
Concentration of mine saline water in high efficiency hybrid RO-NF system
20. MICHAŁ BODZEK, MARIOLA RAJCA, MALWINA TYTLA, BARBARA TOMASZEWSKA
Integration of nanofiltration and reverse osmosis in desalination of mine water
21. MARIOLA RAJCA, RAFAŁ TYTUS BRAY, ELIZA KULBAT, ALEKSANDRA SOKOŁOWSKA
MIEX[®] resin sedimentation process and particles sizes in supernatant water
22. MAŁGORZATA GNUS, ROMAN TURCZYN
Efficiency of ethanol pervaporative dehydration process on the crosslinked polymer membranes prepared from different grades chitosan
23. KRYSZYNA KONIECZNY, KATARZYNA RYCHLEWSKA
Application of poly(ether-block-amide) membranes to gasoline desulfurization by pervaporation
24. MACIEJ SZWAST, DANIEL POLAK, BARTŁOMIEJ MARCJANIAK
The influence of temperature and pressure of the feed on the physical and chemical parameters of the membrane made of PEBA copolymer
25. MACIEJ SZWAST
Study on fluid behavior in permeate channel in membrane gas separation process
26. MARCIN JOB, JANUSZ KOTOWICZ
The analysis of possibilities to increase efficiency of the zero-emission combined cycle power plant with membrane reactor
27. KATARZYNA JANUSZ-SZYMAŃSKA, GRZEGORZ WICIAK
Selected issues in technology of hydrogen membranes for separation in H₂/CO₂ and H₂/CH₄ in power systems
28. ALEKSANDRA KLIMONDA, IZABELA KOWALSKA
Purification and concentration of surfactant solutions using tubular nanofiltration modules
29. ANNA KOWALIK-KLIMCZAK, EWA STANISŁAWEK
Reclamation of water from dairy wastewater using polymeric nanofiltration membranes
30. EDYTA KUDLEK, MARIUSZ DUDZIAK
Assessment of changes in the membrane surface during the filtration of wastewater treatment plant effluent
31. MARZENA SMOL
The use of membrane processes for the removal of phosphorus from wastewater
32. ELWIRA TOMCZAK, WŁADYSŁAW KAMIŃSKI, KONRAD ĆWIRKO
Two-level factorial experiments in the ultrafiltration of oil-water emulsions
33. ANNA KWIECIŃSKA, KATARZYNA RYCHLEWSKA, MATEUSZ KOCHEL, JAN FIGA
The use of low pressure driven membrane processes in enhancement of chemical coke oven wastewater treatment
34. KATARZYNA RYCHLEWSKA, ANNA KWIECIŃSKA, MATEUSZ KOCHEL, JAN FIGA
The use of low pressure driven membrane filtration in biologically treated coke oven wastewater polishing
35. JANINA PIEKUTIN
Use of coagulation and reverse osmosis of petroleum hydrocarbons removal from water
36. DANIEL POLAK, MACIEJ SZWAST
Preliminary studies on microfiltration and photocatalysis integrated process used for laundry wastewater treatment
37. AGNIESZKA URBANOWSKA, MAŁGORZATA KABSCH-KORBUTOWICZ
Application of nanofiltration in NaOH solution regeneration after ultrafiltration membrane cleaning
38. ANNA LEMPART, EDYTA KUDLEK, MARIUSZ DUDZIAK
Nanofiltration treatment of swimming pool water in the aspect of the phenolic micropollutants elimination

39. EDYTA ŁASKAWIEC, MARIUSZ DUDZIAK, JOANNA WYCZARSKA-KOKOT
Application of membrane filtration for recovery of water from backwashings from pool water installations
40. WOJCIECH SZPAKOWSKI, ELWIRA BRODNICKA, MARIA SZPAKOWSKA
Possibility of application of potentiometric sensor with all-solid-state electrodes for quality control of different natural waters
41. ANNA SIEKIERKA, EWA KMIECIK, BARBARA TOMASZEWSKA, KATARZYNA WĄTOR, MAREK BRYJAK
Evaluation of effectiveness of lithium separation by hybrid capacitive deionization with the use of measurement uncertainty
42. JACEK A. WIŚNIEWSKI, SŁAWOMIR SZERZYNA
Removal of chromium ions from water in Donnan dialysis process
43. PAWEŁ RELIGA, BERNADETTA KAŻMIERCZAK, MAŁGORZATA WOJTKOWSKA, ELŻBIETA ROGOŚ
Influence of the nanofiltration method on the retentate composition after model chromium tannery wastewater concentration
44. KATARZYNA WITT, ELŻBIETA RADZYMIŃSKA-LENARCIK
Recovery and separation of metal ions from galvanic waste waters
45. ELŻBIETA RADZYMIŃSKA-LENARCIK, KATARZYNA WITT
Application of membrane extraction in the separation of zinc and cadmium ions
46. CEZARY KOZŁOWSKI, JOLANTA KOZŁOWSKA, MARTA KOŁODZIEJSKA
Effective and selective Au(III) transport across plasticized membrane with resorcinarene derivatives
47. MAŁGORZATA A. KACZOROWSKA, DARIA BOŻEJEWICZ
Application of electrospray ionisation collision induced dissociation method (ESI CID MS/MS) for structural elucidation of metal ions complexes with imidazoles and β -diketones derivatives used as carriers in polymer inclusion membranes
48. VIKTORIIA KONOVALOVA, IRYNA KOLESNYK, OLENA IVANENKO, ANATOLIY BURBAN
Fe²⁺ removal from water using PVDF membranes, modified with magnetite nanoparticles, by polyelectrolyte enhanced ultrafiltration
49. IRENA KORUS
Polymers enhancing ultrafiltration separation of Cd(II) ions
50. MARIA WŁODARCZYK-MAKUŁA
Application of membrane processes to micropollutants removal from wastewater
51. EWA ŁOBOS-MOYSA
The impact of deposit composition on their biodegradability