

## Zakhar Maletskyi



📍 Norway

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### APPOINTMENTS

Norwegian University of Life Sciences (NMBU), Faculty of Science and Technology (REALTEK)  
Ås (Norway) [www.nmbu.no](http://www.nmbu.no)

01/09/2020 – present Associate professor of water and environmental engineering

**Research interests:** Electrochemical and membrane processes for advanced water and wastewater treatment. Environmental and industrial process analytics. Monitoring and treatment of water contaminants of emerging concern. Water-food-energy nexus

**Teaching speciality:** Water and wastewater treatment technology and engineering

**International outlook:** Collaborative research and educational projects within Water Harmony network in Europe, North and South America, East Africa, Central and South Asia

01/09/2019 – 31/08/2020 Researcher

01/09/2015 – 31/08/2019 Postdoctoral fellow in membrane processes for water & wastewater treatment

01/12/2019 – present Research & Development manager (*part-time*)

**Doscon AS**, Oslo (Norway) [www.doscon.no](http://www.doscon.no)

01/12/2012 – 31/08/2015 Research & Development manager

**Ecosoft BWT**, Kiev (Ukraine) [www.ecosoft.com](http://www.ecosoft.com)

01/12/2009 – 30/11/2012 Industrial PhD fellow

**National Technical University of Ukraine / Ecosoft BWT**, Kiev (Ukraine)

01/08/2008 – 30/11/2009 Research engineer

**Ecosoft BWT**, Kiev (Ukraine) [www.ecosoft.com](http://www.ecosoft.com)

12/04/2008 – 22/05/2008 Visiting Researcher

11/04/2009 – 24/05/2009

**Karlsruhe Institute of Technology (KIT), Forschungszentrum Karlsruhe, Institute of Technical Chemistry**, Karlsruhe (Germany)

21/06/2005 – 31/07/2008 Junior Engineer

**Informproject**, Kiev (Ukraine)

## ACADEMIC QUALIFICATIONS

- 2013 **PhD in Engineering - Water treatment technology**  
National Technical University of Ukraine "KPI", Kiev, Ukraine
- 2009 **Master in Chemical Technology and Engineering - Water treatment technology**  
National Technical University of Ukraine "KPI", Kiev, Ukraine

## PROFESSIONAL CERTIFICATIONS

- 2015 **Project Management Professional (PMP)**  
*active*  
Certified by the Project Management Institute (PMI), Pennsylvania (United States)  
*Cert. #1839847, originally earned 04.08.2015*

## INSTITUTIONAL RESPONSIBILITIES

Norwegian University of Life Sciences (NMBU), Faculty of Science and Technology (REALTEK):

- |                    |   |
|--------------------|---|
| Nov 2020 – present | <b>Board member, institute representative</b><br>Faculty research board   |
| 2020 – 2021        | <b>Committee member</b><br>Appointment committee for the position of laboratory technician                              |
| 2020 – 2021        | <b>Working group member, facilitator</b><br>Inter-faculty working group on “Water chemistry” course development         |
| 2020 – 2021        | <b>Working group member</b><br>Faculty working group on values  |
| 2020               | <b>Committee coordinator</b><br>Evaluation committee for the PhD degree of Abhilash Muralidharan Nair                   |
| 2019               | <b>Facilitator</b><br>Development of the WESH group research strategy   |
| 2017               | <b>Research program coordinator</b><br>Strategic PhD program “Environmental effects on societal infrastructure – water” |

## COMMISSIONS OF TRUST

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|-------------------------------|---|-------------------|
| 2021 – present<br>2019 – 2021 | <b>Board chair</b><br><b>Board member</b><br>Forum for technology and development cooperation (FTU), Norwegian society of graduate technical and scientific professionals (Tekna) | Oslo, Norway      |
| 2021 – present                | <b>Board member substitute</b><br>Norwegian water research association (VAnnforsk)  | Oslo, Norway      |
| 2020 – present                | <b>Working group co-leader, Ambassador</b><br>Human Capital working group of Water Europe, European Technology Platform   | Brussels, Belgium |

### Management Committee member

EU COST Action CA19123 – Protection, Resilience, Rehabilitation of damaged environment

### Management Committee substitute

EU COST Action CA19139 – Process-based models for climate impact attribution across sectors

2013 – 2015 **Program coordinator** Kiev, Ukraine

Professional certification program of the Water Quality Association (WQA, US) in Russian speaking countries

2012 – 2014 **National organiser** Kiev, Ukraine

Stockholm Junior Water Prize, Stockholm International Water Institute, responsible for Ukraine

## EXPERT SERVICE

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2 Apr 2019 **Technical expert** Geneva, Switzerland

United Nations workshop of the European Union Water Initiative Plus for the Eastern Partnership (EUWI+ 4 EaP)

12-13 Feb 2019 **Technical expert** Bonn, Germany

United Nations World Health Organisation: Meeting of policymakers and experts

2019 – 2020 **Expert team member** Internationally

United Nations World Health Organisation and Economic Commission for Europe, Joint Secretariat for the Protocol on Water and Health: Sanitation Scoping Study in the pan-European region (review for 56 countries)

## PEER-REVIEW

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3-5 assignments per year

IWA Water Research; MDPI Water; MDPI Membranes; Water, Air, & Soil Pollution; Elsevier Desalination; MDPI Resources; MDPI Toxins, Elsevier books

## ORGANISATION OF MEETINGS

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2021 **Scientific committee member** Novi Sad, Serbia

International symposium "Water resources management: new perspectives and innovation practices"

**Workshop co-facilitator** Online

Workshop "Building a water smart Europe in the digital age: drivers, barriers and opportunities", Water Knowledge Europe, Water Europe

**Member of the organising committee** Online

United Nations World Water Day, Norwegian national event "Value of water"

2020 **Scientific committee secretary** Online

International conference on Water, Society and Climate Change (WaSo), concluding event of the NORAD-NORHED project, 85 presenters and around 200 participants

- Moderator** Online  
 “Play to learn the Nexus Approach - Serious Game: learning for a resource-efficient and green economy”. Water Knowledge Europe 2020 - EU Green Deal Call Brokerage event, organised by Water Europe (online), around 30 participants
- Chair of the organising committee** Online  
 United Nations World Water Day, Norwegian national event “Water and Climate Change”, 200 participants
- Scientific committee secretary** Harbin, China  
 European Water Association and International Water Association joint conference “Water Management in Cold Climate”, around 100 participants
- 2019 **Workshop co-facilitator** Colombo, Sri Lanka  
 International Water Association World Water Development Congress
- Rapporteur** Oslo, Norway  
 European Water Association Green Capital Conference: Sustainable urban drainage solutions (SUDS)
- 2018 **Workshop coordinator** Norway-Germany  
 NATO Science for Peace, Water Safety Advanced Research Workshop
- Scientific advisory committee member** Kandy, Sri Lanka  
 The 9th International Conference on Sustainable Built Environment, special session on Water Management in Developing Countries
- 2016 **Scientific committee secretary** Oslo, Norway  
 International Water Association, Particle Separation Conference, around 150 participants
- Scientific committee secretary** Spitsbergen  
 European Water Association, Water Management in Cold Climate Conference, around 100 participants

## MEMBERSHIPS

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International Water Association (IWA)  
 Water Europe – Technological Platform of the European Commission  
 Norwegian Society of Graduate Technical and Scientific Professionals (Tekna)  
 European Membrane Society (EMS)  
 International Society of Automation (ISA)  
 International Association of Facilitators (IAF)  
 Project Management Institute (PMI)  
 National Centre for Faculty Development & Diversity (USA)  
 WaterNet, professional NGO  
 Norwegian Trekking Association (DNT)

### FELLOWSHIPS & SCHOLARSHIPS

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- 2021 **Research Talent for Sustainability (NMBU)**  
University talent development program
- 2020 **Faculty research boost fellowship (REALTEK, NMBU)**  
Research networking and development activities
- 2017 **Scholarship for research stays abroad (NMBU)**  
Research stays at the Michigan State University (US) and Kyungpook National University (South Korea)
- 2008 – 2009 **Young scientist scholarship (German Research Foundation, DFG)**  
Research stays at the Forschungszentrum Karlsruhe (Karlsruhe Institute of Technology)

### PERSONAL SKILLS

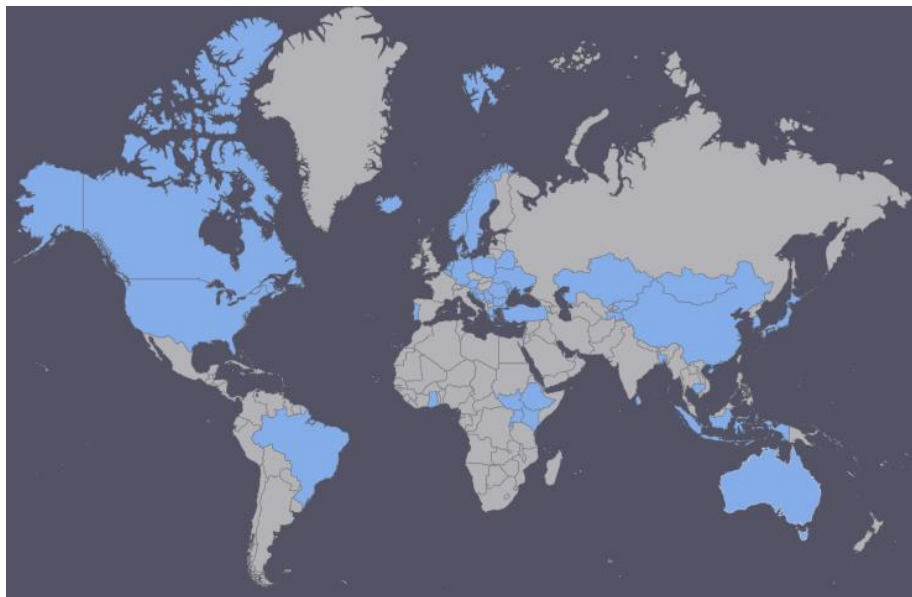
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Working languages    English, Norwegian, Russian, Ukrainian

### COLLABORATIONS

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Map of collaborators from **45 countries** in research and educational projects



### EDUCATIONAL ACTIVITIES

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- Academic instruction    Co-instructor at the Norwegian University of Life Sciences
  - THT 271** (15 ECTS) Water and wastewater treatment technology
  - THT 310** (15 ECTS) Water and wastewater treatment engineering
  - THT 311** (10 ECTS) Water resources management and treatment technologies
  - THT 312** (5 ECTS) Water management in cold climate
  - IMRT 100** Introduction about the water treatment industry

Invited lectures	<b>South Kazakhstan State University</b> ( <i>Kazakhstan, June 2020 and 2016</i> ) <b>Qingdao University of Technology</b> ( <i>China, 29-29 August 2018, December 2017</i> ) <b>Shandong Jianzhu University</b> ( <i>China, November 2017</i> )			
Instruction in Lifelong Learning Courses	<b>Water Harmony online training for academic staff</b> ( <i>May 2020 – July 2021</i> ) <b>United Nations Economic Commission for Europe (UNECE),</b> <b>“Water resource management and modern water treatment technologies”:</b> professional extension course in the context of Protocol on Water and Health supporting National Dialogue on Water Policy under Integrated Water Resources Management in Kyrgyzstan and Kazakhstan <i>24-25 September 2018 in Bishkek, Kyrgyzstan</i> <i>26-27 September 2018 in Shymkent, Kazakhstan</i> <i>22-23 October 2018 in Osh, Kyrgyzstan</i>			
PhD co-supervision (2)	Flux Enhancers in Biofilm Membrane Bioreactors: Insight into Fouling Control	Olga Kulesha	2016-2019	
	Ecological safety of dairy processing	Volodymyr Besedyuk	2021-2023	
MSc supervision (14)	<b>Main supervisor (9)</b>			
	1 A review of selected natural coagulants in water and wastewater treatment	Sebastian Slinning Aarø	2020	
	2 Nanofiltration of surface water with high organic content, focusing on reserve water supply in Halden municipality	Gorm Walter Høili Pettersen	2019	
	3 Advanced coagulation and membrane filtration treatment of effluent from high-rate MBBR	Lars Rumohr Blingsmo and Leon Dokland	2019	
	4			
	5 Effects of electrochemical treatment of mixed liquor in submerged ceramic membrane bioreactor	Roman Kuzhel and Anastasiia Nehrii	2019	
	6			
	7 Comparison of treatment and fouling mitigation efficiency of organic and inorganic coagulants in biofilm membrane bioreactor	Vladyslav Shostak	2019	
	8 Operational Optimization of Biofilm Membrane BioReactor (BMBR) for decentralized wastewater treatment	Anura Kumara Arembage	2018	
	9 Testing Aluminium based chemicals for fouling reduction in membrane bioreactor	Dawit Kahsay Zigta	2017	
	<b>Co-supervisor (5)</b>			
	10 Impact of Climate Change on water supply	Shafici Adib	2020	
	11 Electrocoagulation in wastewater treatment: a review	Thea Caroline Granhus	2020	
	12 Prediction of THM Formation Potential in disinfection of drinking water	Evelina Koltsova	2019	
	13 Investigations of challenges and assessment of measures to be taken in association with the treatment plant at Orkla's production facilities in Rygge	Samson Langfeldt	2017	
	14 Chronic Kidney Disease (CKD) in Sri Lanka – Evaluation of Status, Practices and Potential Pollutants	Mathias Espeland	2016	
Supervision of visiting researchers and exchange students (10)	1 MSCA postdoc	Development of Emerging Contaminants Soft Sensor	Agnieszka Cuprys, Poland	2021

## Academic Curriculum Vitae with Track Record

2	Mitacs Globalink Phd Student	Functionalized nano-adsorbent for simultaneous removal of heavy metals and ciprofloxacin from wastewater (PhD student from Institut national de la recherche scientifique – Québec, Canada – 3 months)	Agnieszka Cuprys, <i>Canada</i>	2019
3	ERASMUS+	Comparative study of activated carbon and modified biochar for removal of heavy metals (10 ECTS)	Mihaela Bectoras, <i>Romania</i>	2019
4	ERASMUS+	Removal of ciprofloxacin with electrocoagulation (10 ECTS)	Ilieva Natalia, <i>Romania</i>	2019
5	ERASMUS+	Understanding mechanism and development of approaches to control membrane fouling in membrane bioreactor (MBR) (30 ECTS)	Yuliia Dzihora, <i>Ukraine</i>	2017
6	ERASMUS+	Handling of reject water and improvement of sludge dewatering in sewage treatment (30 ECTS)	Ivan Borysov, <i>Ukraine</i>	2017
7	ERASMUS+	Hybrid sorption-membrane water treatment technology for removal of organic pollutants of natural and synthetic origin (30 ECTS)	Svitlana Kyrii, <i>Ukraine</i>	2017
8	ERASMUS+	Iron-based fine particle adsorbents for water treatment (30 ECTS)	Marta Litynska, <i>Ukraine</i>	2017
9	ERASMUS+	Membrane fouling reducers for submerged MBR – experimental proof of concept on laboratory scale (30 ECTS)	Stella Saliu, <i>Ukraine</i>	2017
10	NORAD- NORHED	Removal of Arsenic from drinking water with reverse osmosis (30 ECTS)	Kim Lengthong, <i>Cambodia</i>	2017

### Educational projects (14)

2021 – 2022 0.25 mil EUR	<b>Project manager</b> SMARTEN – Serious games for digital readiness of water education <a href="http://www.smartenproject.eu">www.smartenproject.eu</a> <i>ERASMUS+ Strategic Partnership for digitalisation of education (EU)</i>
2021 – 2023 1 mil EUR	<b>Work package leader, co-proposer</b> DIGIWATER – Digitalisation of water industry by innovative graduate water education <a href="http://www.waterharmony.net/digiwater">www.waterharmony.net/digiwater</a> <i>ERASMUS+ Knowledge Alliance (EU)</i>
2021 – 2023 1 mil EUR	<b>Work package leader, co-proposer</b> CCWater – Graduates for Climate Change adapted water management <a href="http://www.waterharmony.net/ccwater">www.waterharmony.net/ccwater</a> <i>ERASMUS+ Capacity Building in Higher Education (EU)</i>
2021 – 2026 20 mil NOK	<b>Collaborator, co-proposer</b> Water ESSENCE Africa - creating synergy to meet the global challenges <i>Norad NORHED II (Norway)</i>
2021 – 2023 90 000 EUR	<b>Collaborator, co-proposer</b> Digitalisation of the water sector and water education <i>EEA Grants for Romania (Norway)</i>
2020 – 2021 0,3 mil NOK	<b>Collaborator</b> NANOWATER – Managing nanoparticles and use of nanotechnology in water <a href="http://www.waterharmony.net/nanowater">www.waterharmony.net/nanowater</a> <i>Diku-RCN, Partnership with North America Program (Norway)</i>



2020 – 2021 25 000 EUR	<b>Collaborator</b> Arctic Water <i>Arctic Research and Studies programme of the Icelandic and Norwegian Foreign Ministries</i>
2018 – 2021 0,9 mil EUR	<b>Coordinator for NMBU, work package leader</b> SWARM – Strengthening of MSc curricula in Water Resource Management for the Western Balkans HEIs and stakeholders <a href="http://www.swarm.ni.ac.rs">www.swarm.ni.ac.rs</a> <i>ERASMUS+ Capacity Building in Higher Education (EU)</i>
2018 – 2019 0,3 mil NOK	<b>Project manager</b> TENOR – Towards the circular EcoNomy in Organic faRming <a href="http://www.tenorproject.eu">www.tenorproject.eu</a> <i>Diku Eurasia Program (Norway)</i>
2018 – 2019 0,3 mil NOK	<b>Project manager</b> AECo – Advancing Electrocoagulation for Water Safety and Circularity <a href="http://www.aeco-project.org">www.aeco-project.org</a> <i>Diku-RCN, Partnership with North America Program (Norway)</i>
2017 – 2019 2 mil NOK	<b>Collaborator</b> WaterMagic – Water Management in Cold Climate <a href="http://www.watermagic.org">www.watermagic.org</a> <i>Diku High North Program (Norway)</i>
2016 – 2020 6 mil USD	<b>Work package leader</b> WaSo – Water, Society and Climate Change <a href="http://www.wasoproject.org">www.wasoproject.org</a> <i>Norad NORHED (Norway)</i>
2015 – 2018 1,1 mil EUR	<b>Coordinating secretary</b> Water Harmony – Harmonising water related graduate education <a href="http://www.waterh.eu">www.waterh.eu</a> <i>ERASMUS+ Capacity Building in Higher Education (EU)</i>
2012 – 2020 15 mil NOK	<b>Coordinating secretary</b> Water Harmony – Integration of Education, Research, Innovation and Entrepreneurship. Curricula development and improvement of teaching tools <a href="http://www.waterh.net">www.waterh.net</a> <i>Diku Eurasia (Norway)</i>

## SCHOLARLY ACTIVITIES

### Research projects (11)

2021 – 2026 10 mil NOK	<b>Work package leader, co-investigator</b> PATCHER – Protecting aquatic ecosystem and human health from micropollutants <i>Research Council of Norway, INTPART program</i>
2021 – 2022 97 000 NOK	<b>Project manager, co-investigator</b> IntelMEM – Intelligent nanofiltration membrane systems for natural organic matter removal in water treatment <i>Research Council of Norway and German Academic Exchange Service</i>
2021 – 2023 0,2 mil EUR	<b>Co-investigator</b> ECO-SOS – Development of Emerging Contaminants Soft Sensor <i>Horizon 2020 MSCA (EU)</i>
2021 – 2023 3,3 mil NOK	<b>Principal investigator</b> SEKRENS – Secondary chemical treatment of wastewater: optimisation with process control, oxidative and biofilm processes <i>Research Council of Norway – Regional Research Fund</i>



## Academic Curriculum Vitae with Track Record

2021 – 2025	<b>Secondary proposer</b> NexusNet – Network on water-energy-food nexus for a low-carbon economy in Europe and beyond <i>Horizon 2020 COST (EU)</i>
2020 – 2023 5,8 mil NOK	<b>Project manager, principal investigator</b> AECo – Advancing EleCtrochemical processes for water safety and circularity <i>Research Council of Norway, INTPART program</i>
2019 – 2021 2 mil EUR	<b>Work package leader, co-proposer</b> Water Harmony JPI – Closing the Water Cycle Gap with Harmonised Actions for Sustainable Management of Water Resources <a href="http://www.waterharmony.net/wjpi">www.waterharmony.net/wjpi</a> <i>ERA-NET Water JPI (EU)</i>
2017 – 2023 12,3 mil NOK	<b>Work package leader, co-investigator</b> MEMPREX – International partnership on membrane processes in water treatment for research and educational excellence <a href="http://www.memprex.org">www.memprex.org</a> <i>Research Council of Norway, INTPART program</i>
2016 – 2018	<b>Researcher</b> HumusTek – New technology for purification of NOM-containing water for reserve water supply <i>Research Council of Norway – Regional Research Fund</i>
2015 – 2018	<b>Project manager and principal investigator from NMBU as a research partner</b> CE-MBR – Development of Chemically Enhanced Membrane Biological Reactor <i>Research Council of Norway – Innovation for Industrial Sector</i>
2015 – 2017 0,5 mil USD	<b>Researcher</b> IMPREG – Improving wastewater treatment with better phosphorus recovery <i>EEA Grants POL-NOR (Norway)</i>

### Peer-reviewed journal publications (17)

#### Published (12)

1. **Maletskiy, Z.**; Zigta, D.K.; Kulesha, O.; Ratnaweera, H. Chemical Enhancement for Retrofitting Moving Bed Biofilm and Integrated Fixed Film Activated Sludge Systems into Membrane Bioreactors. *Membranes-Basel* 2019, 9, doi:10.3390/membranes9100135.
2. Kulesha, O.; **Maletskiy, Z.**; Kvaal, K.; Ratnaweera, H. Strategy for Flux Enhancement in Biofilm Ceramic Membrane Bioreactor Applying Prepolymerized and Non-Prepolymerized Inorganic Coagulants. *Water-Sui* 2019, 11, doi:10.3390/w11030446.
3. **Maletskiy, Z.** Water Critical Infrastructure Preparedness in Emerging Economies. In *Physical and Cyber Safety in Critical Water Infrastructure*, Ratnaweera, H., Pivovarov, O., Eds. IOS Press BV: Amsterdam, 2019; pp. 91-99.
4. Kulesha, O.; **Maletskiy, Z.**; Ratnaweera, H. State-of-the-art of membrane flux enhancement in membrane bioreactor. *Cogent Eng* 2018, 5, doi:10.1080/23311916.2018.1489700.
5. Kulesha, O.; **Maletskiy, Z.**; Ratnaweera, H. Multivariate Chemometric Analysis of Membrane Fouling Patterns in Biofilm Ceramic Membrane Bioreactor. *Water-Sui* 2018, 10, doi:10.3390/w10080982.
6. **Maletskiy, Z.**; Mitchenko, T.; Makarova, N.; Shevchuk, E.; Kolomiets, Y. Comparative assessment of sorption properties of commercially available and experimental hybrid materials aimed to impurities of As(III) and As(V) in water. *Water & Water purification technologies. Scientific & Technical News* 2012, 1(7), 21-30.
7. Orestov, Y.; **Maletskiy, Z.**; Mitchenko, T. Peculiarities of physical-chemical transformation of iron compounds in groundwater. *Water & purification technologies. Scientific & Technical News* 2011, 1(3), 4-11.
8. **Maletskiy, Z.**; Mitchenko, T.; Makarova, N.; Hoell, W.H. Properties of anion exchange resins exhausted by humic compounds. *Desalin Water Treat* 2011, 25, 78-83, doi:10.5004/dwt.2011.1524.

9. **Maletskyi, Z.**; Mitchenko, T. About the mechanism of properties transformation of anion exchange resins impregnated with humic substances. *Scientific notes of National Kiev Mohyla Academy. Chemical technologies and science* 2011, 118, 21-30.
10. Fendri, F.; Mitchenko, T.; **Maletskyi, Z.** Optimization of the reverse osmosis seawater demineralization technologies for a power producing industry. *Desalin Water Treat* 2011, 25, 84-90, doi:DOI 10.5004/dwt.2011.1832.
11. Shobotov, S.; Kvitka, A.; **Maletskyi, Z.** Structural optimization of double-stage membrane system for seawater demineralization. *Water & Purification Technologies. Scientific & Technical News* 2010, 2(2), 59-72.
12. **Maletskyi, Z.**; Mitchenko, T.; Makarova, N.; Hoell, W. Formation and properties of hybrid sorbents based on anion exchange resins and humic substances. *Scientific notes of National Kiev Mohyla Academy. Chemical technologies and science* 2009, 92, 69-75.

#### Manuscripts under review (1)

13. Cuprys, A.; **Maletskyi, Z.**; Rouissi, T.; Ratnaweera, H.; Knystautas, É; Drogui, P. Simultaneous removal of heavy metals and ciprofloxacin from municipal wastewater using functionalized biochar beads. *Science of the Total Environment*.

#### Manuscripts under preparation (4)

14. **Maletskyi, Z.**; Litynska M.; Ratnaweera H. Heated Iron Oxide Particles for water treatment: relationship between synthesis conditions and properties. Preparing for: *Water MDPI*. Submission in December 2019
15. **Maletskyi, Z.**; Koltsova E.; Ratnaweera H. UV-VIS spectroscopy for prediction of Trihalomethanes Formation Potential in disinfection of drinking water. Preparing for: *Water MDPI*. Submission in January 2020
16. **Maletskyi Z.**; Shostak V.; Ratnaweera H.; Tarabara V. Natural and synthetic coagulants for water and wastewater treatment: A review. Submission in February 2020
17. Kyrii S.; Kosogina I.; Astrelin I.; Klimenko N.; **Maletskyi Z.**; Ratnaweera H. Towards cradle-to-cradle in alumina refinery: Perspective of bauxite tailings as natural organics adsorbents for water treatment. Submission in February 2020

#### Book chapters (5)

1. **Maletskyi, Z.** Advances in Membrane Materials and Processes for Water and Wastewater Treatment. In *Multidisciplinary Advances in Efficient Separation Processes*, American Chemical Society: 2020; Vol. 1348, pp. 3-35.
2. **Maletskyi, Z.** Water for boilers. Chemical water treatment. In *Current water issues. Modern water treatment world*, Mitchenko, T., Ed. *WaterNet: Kiev, Ukraine*, 2019; pp. 56-62. ISBN 978-966-97940-1-7
3. **Maletskyi, Z.**; Mitchenko, T. Ion exchange. In *Physico-chemical methods of water treatment. Water resources management*, Astrelin, I., Ratnaweera, H., Eds. *Water Harmony: 2015*. ISBN 978-82-999978-0-5
4. **Maletskyi, Z.** New developments in water and wastewater treatment technologies. In *Physico-chemical methods of water treatment. Water resources management*, Astrelin, I., Ratnaweera, H., Eds. *Water Harmony: 2015*. ISBN 978-82-999978-0-5
5. Orestov, Y.; Mitchenko, T.; **Maletskyi, Z.** Membrane processes. In *Physico-chemical methods of water treatment. Water resources management*, Astrelin, I., Ratnaweera, H., Eds. *Water Harmony: 2015*. ISBN 978-82-999978-0-5

#### Conference papers (17)

1. **Maletskyi, Z.**; Zigta, D. Membrane fouling control in centralized and decentralized Bf-MBR wastewater treatment plants. In *Proceedings of IWA Water and Development Congress and Exhibition, Colombo, Sri Lanka*, 1-5 December 2019.
2. **Maletskyi, Z.**; Ratnaweera, H.; Kulesha, O. Membrane fouling reduction in biofilm MBR applying polymeric and monomeric inorganic coagulants. In *Proceedings of The 9th IWA Membrane Technology Conference and Exhibition for Water and Wastewater Treatment and Reuse, Toulouse, France*, 23-27 June 2019; pp. 67-68.
3. **Maletskyi, Z.**; Kulesha, O. Comparison of Al- and Fe-based Membrane Fouling Reducers for Biofilm Membrane Bioreactor. *Euromembrane, Valencia, Spain*, 9-13 July 2018.
4. **Maletskyi, Z.**; Kulesha, O. Fouling behavior of chemically modified mixed liquor from

submerged ceramic biofilm-membrane bioreactor. Abstr Pap Am Chem S 2018, 256.

5. **Maletskyi, Z.** Multiple water sources and water-smart society for emerging markets. In Proceedings of 9th International Conference on Sustainable Built Environment (ICSBE), Kandy, Sri Lanka, 13-15 December 2018.
6. **Maletskyi, Z.** Towards water-smart circular economy. Building a case in organic farming. In Proceedings of 5th International Water Forum "Water Resources and Climate", Minsk, Belarus, 5-6 October 2017.
7. Kulesha, O.; **Maletskyi, Z.**; Todt, D.; Ratnaweera, H. Development and validation of performance evaluation protocol for small wastewater treatment MBR systems In Proceedings of S2SMALL International IWA Conference on Sustainable Solutions for Small Water and Wastewater Treatment Systems, Nantes, France, 22-26 October 2017.
8. **Maletskyi, Z.**; Mitchenko, T. Human Right to Water in Countries with Transition Economy: Water Quality Monitoring Issues. In Proceedings of IWA World Water Congress, Lisbon, Portugal, 21-26 September 2014.
9. **Maletskyi, Z.**; Mitchenko, T.; Shevchuk, E.; Stender, P.; Kolomiets, Y. Comparative assessment of filter media for arsenic removal from drinking water: Commercially available and perspective hybrid sorbents. In Proceedings of 11th World Filtration Congress, Graz, Austria, 16-20 April 2012.
10. **Maletskyi, Z.**; Mitchenko, T.; Makarova, N. Obtaining and properties investigation of Hybrid Sorbents based on nanoparticles of Humic Substances. In Proceedings of IWA Specialist Conference "Applications of Nanotechnology in the Water Sector", Monte Verità, Ascona, Switzerland, 15 May 2011; p. 83.
11. **Maletskyi, Z.**; Mitchenko, T.; Shevchuk, E.; Orestov, Y. Hybrid sorbents for iron removal process in RO technologies. In Proceedings of International Congress on Membranes and Membrane Processes, Amsterdam, The Netherlands, 23-29 July 2011.
12. **Maletskyi, Z.**; Mitchenko, T.; Shevchuk, E.; Orestov, Y. Prevention of Iron fouling by feed water pretreatment with hybrid sorbent. In Proceedings of 6th IWA Specialist Conference on Membrane Technology for Water & Wastewater Treatment, Aachen, Germany, 4-7 October 2011.
13. Fendri, F.; Mitchenko, T.; **Maletskyi, Z.** Cost-effective seawater desalination technology based on reuse of municipal water. In Proceedings of International Conference EuroMed, Tel Aviv, Israel, 3-7 October 2010; p. 87.
14. **Maletskyi, Z.**; Mitchenko, T.; Makarova, N.; Shevchuk, E. Eliminating Arsenic from RO concentrates by the reuse of anion exchange resins. In Proceedings of International Conference EuroMed, Tel Aviv, Israel, 3-7 October 2010; pp. 85-87.
15. Fendri, F.; Mitchenko, T.; **Maletskyi, Z.** Varying seawater salinity as optimization factor in water demineralization and efficient way of municipal wastewater utilization. In Proceedings of IWA Regional Conference and Exhibition on Membrane Technology and Water Reuse, Istanbul, Turkey, 18-22 October 2010; pp. 684-687.
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