

| Sunday June 26, 2020 – Day 1 | |
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| 17:00 - 19:00 | Arrival, check-in, registration |
| 19:00 - 21:00 | Welcome cocktail reception: Dinner must be reserved and paid for individually at the Achalm restaurant |
| Monday June 27, 2022 – Day 2 | |
| 8:30 – 9:00 | Welcome: Prof. Andrea I. Schäfer (IAMT-KIT, Germany) – Chair Nanofiltration 2022 |
| 9:00 – 9:15 | Opening: Prof. Volker Saile in <i>lieu</i> of Prof. Oliver Kraft – Vice-President Research (KIT, Germany) |
| 9:15 – 9:30 | Greetings from the Elders: Prof. Miriam Balaban and Prof. Heiner Strathmann: The history of nanofiltration and desalination: From Reutlingen to the world |
| Session 1 - The Case for Nanofiltration: From Climate Change to Micropollutants | |
| 9:30 – 10:00 | IL 1: Prof. Damià Barceló Cullerès (IDAEA-CSIC, Spain): The EU GLOBAQUA project on multiple stressors in rivers under water scarcity and global change. Results of a reconnaissance study in selected European rivers and the need for advanced water treatment solutions |
| 10:00 – 10:20 | OP 1.1: Prof. Andreas Fath (HFU, Germany): Plastic litter as raw material (source) for wastewater treatment & a fresh report from the Danube challenge https://www.cleandanube.org/?lang=en |
| 10:20 – 10:30 | Group photo 📷 |
| 10:30 – 11:00 | Coffee break & poster exhibition |
| Session 2 - Nanofiltration: Opportunities and Limitations for Water & Environment | |
| 11:00 – 11:30 | IL 2: Dipl. Chem. Ing. FH Markus Kyburz (Kyburz Consulting, Switzerland): NF membranes in the chemical processing industry |
| 11:30 – 11:50 | OP 2.1: Dr. Pia Lipp (TZW, Germany): Membrane technology in German water treatment: Overview and historic development |
| 11:50 – 12:10 | OP 2.2: Dr. Céline Jacquin (Eawag, Switzerland): Gravity-driven membrane filtration as nanofiltration pre-treatment: Effect of space reduction for biofilm growth and second-life membranes on flux performance and biopolymers removal |
| 12:10 – 12:30 | OP 2.3: Selina Hube (UI, Iceland): Recent advances of emerging pollutant mitigation in decentralized wastewater treatment processes: Potential of nanofiltration |
| 12:30 – 12:50 | OP 2.4: Camila Suliani Raota (KIT-IAMT, Germany): Photodegradation of organic pollutants using photosensitized membranes |
| 12:50 – 13:00 | Discussion |
| 13:00 - 14:00 | Lunch |
| Session 3 - Nanofiltration Applications I: Water Treatment | |
| 14:00 – 14:30 | IL 3: Prof. Jack Gilron (BGU, Israel): NF in hybrids desalting seawater |
| 14:30 – 14:50 | OP 3.1: Philippe Sauvignet (Veolia, France): Low-pressure nanofiltration coupled with ultrafiltration: An efficient solution for drinking water treatment |
| 14:50 – 15:10 | OP 3.2: Prof. Yoram Cohen (UCLA, USA): Hybrid RO-NF for reduced applied pressure requirement in high recovery water treatment and desalination |
| 15:10 – 15:30 | OP 3.3: Dr. Mohit Chaudhary (BGU, Israel) Mixed matrix composite nanofiltration membranes for enhanced removal of PFOA from contaminated water |
| 15:30 – 15:50 | OP 3.4: Dr. Marcus Weyd (Fraunhofer IKTS, Germany): Ceramic nanofiltration membranes in process and wastewater treatment |
| 15:50 – 16:00 | Discussion |
| 16:00 – 16:30 | Coffee break & poster exhibition |
| Session 4 - Nanofiltration Principles: Characterization/Fouling/Scaling | |
| 16:30 – 17:00 | IL 4: Prof. Gregory Korshin (Uni Washington, USA): Interactions of alginate/toluidine blue complexes with PES membrane and examination of fouling development mechanisms |
| 17:00 – 17:20 | OP 4.1: Dr. Alessandra Imbrogno (KIT- IAMT, Germany): Micropollutants removal and partitioning in hybrid nanofiltration process |
| 17:20 – 17:40 | OP 4.2: Prof. Stefan Panglisch (Uni Duisburg Essen, Germany): Investigating fouling behavior of nanofiltration capillary membranes in water treatment and its impact on separation performance |
| 17:40 – 18:00 | OP 4.3: Prof. Vitaly Gitis (BGU, Israel): Mitigating NF fouling with micronanobubbles |
| 18:00 – 18:20 | OP 4.4: Prof. Rodrigo Bórquez (UDEDEC, Chile): Separation of calcium and magnesium from seawater using diananofiltration |
| 18:20 – 18:30 | Discussion |
| 19:30 | <i>Dinner: 'Echt Schwäbisch!' Swabian culinary introduction and traditional meal followed by a long night at the bar or...!?</i> |
| Tuesday June 28, 2022 – Day 3 | |
| Session 5 - Nanofiltration Principles: Transport Mechanisms | |
| 08:30 – 09:00 | IL 5: Prof. Menachem Elimelech (Yale, USA): Next-generation desalination and water purification membranes: Where are we now? |
| 09:00 – 09:20 | OP 5.1: Prof. Viatcheslav Freger (Technion, Israel): Ion association as a key element in NF modeling |
| 09:20 – 09:40 | OP 5.2: Prof. Andriy Yaroshchuk (ICREA - UPC, Spain): Multifaceted role of modelling in membrane science and technology |
| 09:40 – 10:00 | OP 5.3: Prof. Razi Epsztein (Technion, Israel): Insights into the application of transition-state theory to transport in nanofiltration membranes |
| 10:00 – 10:20 | OP 5.4: Prof. Oded Nir (BGU, Israel): Progress in understanding concentration-polarization in nanofiltration |
| 10:20 – 10:30 | Discussion |
| 10:30 – 11:00 | Coffee break & poster exhibition |

| Session 6 - Nanofiltration Principles: Nanofluidics | |
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| 11:00 – 11:30 | IL 6a: Prof. Rohit Karnik (MIT, USA): Nanofluidic transport across nanoporous atomically thin graphene and its development as a next-generation membrane |
| 11:30 – 12:00 | IL 6b: Prof. Marija Drndić (UPenn, USA): Engineering adjustable multi-pore devices for parallel ion and molecule transport |
| 12:00 – 12:20 | OP 6.1: Prof. Yoav Green (BGU, Israel): Electrical conductance of charged nanopores |
| 12:20 – 12:40 | OP 6.2: Prof. Aleksandr Noy (LLNL, USA): 1.5 nm diameter carbon nanotube porins as model nanofluidic channels |
| 12:40 – 13:00 | OP 6.3: Soufiane Abdelghani-Idrissi (ENS, CNRS, France): Voltage induced reverse osmosis (VIRO) |
| 13:00 - 14:00 | Lunch (and discussion) |
| Session 7 - Nanofiltration Applications II: Industrial & Resource Recovery | |
| 14:00 – 14:30 | IL 7: Dr. Hanna Kyllönen (VTT, Finland): Nanofiltration as a part of nitrogen recovery concept |
| 14:30 – 14:50 | OP 7.1: Prof. Volodymyr Tarabara (MSU, USA): Nanofiltration of saline oil-water emissions: Combined effect of salt concentration polarization and fouling by oil on flux performance |
| 14:50 – 15:10 | OP 7.2: Prof. Thomas Wintgens (RWTH - Aachen, Germany): Advances in nanofiltration for landfill leachate treatment |
| 15:10 – 15:30 | OP 7.3: Prof. Benoit Teychene (Uni Poitiers, France): Description of polar mobile organic compounds (PMOC) removal by tight nanofiltration (NF90) using decision tree methodology |
| 15:30 – 15:50 | OP 7.4: Ramatisa Ladeia Ramos (UFMG, Brazil): Commercial nanofiltration membranes applied in an integrated route for the reclamation of gold mining effluent |
| 15:50 – 16:10 | OP 7.5: Dr. Agnieszka Cuprys (NMBU, Norway): Chitosan-functionalized biochar for simultaneous sorption of ciprofloxacin and heavy metals in hybrid nanofiltration-adsorption process |
| 16:10 – 16:30 | Discussion |
| 16:30 – 17:00 | Coffee break & poster exhibition |
| Session 8 - Publish or Perish: Hot Topics in Publishing - Chair: Dr. Fabio Pulizzi (Nature) | |
| 17:00 – 18:00 | Panel discussion of panellists in attendance of publishers (Nature Nanotechnology/Nature Water, Nature Portfolio Journals (npj Clean Water), European Desalination Society (EDS), Elsevier). Open questions & answers about publishing |
| 18:00 – 19:00 | Poster session (with presenter) |
| 19:00 – 22:00 | Dinner BBQ (Achalm) with Liveband 'Junik': bring your dancing shoes! |
| 22:00 | Night walk to Achalm summit: bring torch & walking shoes |
| Wednesday June 29, 2022 – Day 4 | |
| Session 9 - Nanofiltration New Materials I | |
| 08:20 – 08:50 | IL 9a: Prof. Mihail Barboiu (IEM – Uni Montpellier, France): Artificial water channels - toward biomimetic membranes for desalination |
| 08:50 – 09:20 | IL 9b: Prof. Daniel Mandler (HUJI, Israel): Electrochemical membranes for monitoring and treatment of recycled water |
| 09:20 – 09:40 | OP 9.1: Prof. Mathias Ulbricht (Uni Duisburg Essen, Germany): Polyelectrolytes and polymeric ionomers for tailoring selectivity and permeability of nanofiltration membranes |
| 09:40 – 10:00 | OP 9.2: Prof. Suzana P. Nunes (KAUST, Saudi Arabia): Functionalized thin-film nanofiltration membranes |
| 10:00 – 10:20 | OP 9.3: Prof. Lei Fang (TAMU, USA): Aromatic porous polymer network membranes for organic solvent nanofiltration under extreme conditions |
| 10:20 – 10:30 | Discussion |
| 10:30 – 11:00 | Coffee break & poster exhibition |
| Session 10 - Nanofiltration Applications III: Desalination & Reuse | |
| 11:00 – 11:30 | IL10: Prof. Lidieta Giorno (ITM-CNR, Italy): Nanofiltration in integrated membrane processes for the biorefinery of agri-food wastes |
| 11:30 – 11:50 | OP 10.1: Dr. Julia Witte (DSM, Switzerland): Advanced organic solvent nanofiltration in food and pharma industry – from scratch to production scale |
| 11:50 – 12:10 | OP 10.2: Hanna Rosentreter (TU Dresden, Germany): Partial desalination of saline groundwater by nanofiltration within the use of Abstraction-Desalination-Recharge methodology |
| 12:10 – 12:30 | OP 10.3: Dr. Loreen Ople Villacorte (Grundfos, Denmark): Application of hollow fiber nanofiltration membrane to reduce water footprint of evaporative cooling towers |
| 12:30 – 12:50 | OP 10.4: Prof. Bing Wu (UI, Iceland): Nanofiltration membrane bioreactor + reverse osmosis for wastewater reclamation |
| 12:50 – 13:00 | Discussion |
| 13:00 - 14:00 | Lunch |
| Session 11 - Nanoscale Imaging | |
| 14:00 – 14:30 | IL 11: Prof. Hans-Georg Steinrück (Uni Paderborn, Germany): Advanced nanoscale imaging of membranes: Opportunities and (related) examples |
| 14:30 – 14:50 | OP 11.1: Prof. Silke Christiansen (Fraunhofer IKTS, Germany): Micro- and nano-plastic water filtering, microscopic and spectroscopic imaging and automated pattern recognition using deep learning methodology |
| 14:50 – 15:10 | OP 11.2: Dr. Claus J. Burkhardt (NMI, Germany): High throughput polyamide-based filter membrane produced by nanosphere lithography |
| 15:10 – 15:30 | OP 11.3: Dr. Marcel Dickmann (Uni BW, Germany): Porosimetry of nano-pores in thin polymer films by depth-resolved positron annihilation lifetime spectroscopy |
| 15:30 – 15:50 | OP 11.4: Prof. Patrick Huber (TUHH, Germany): Nanoporous silicon – polypyrrole hybrids as electrically switchable membrane materials |

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| 15:50 – 16:00 | Discussion |
| 16:00 | Coffee on the go! |
| 16:00 – late | Evening Program: Visit Lichtenstein Castle – Reception & Dinner Altes Forsthaus. <u>Transport by bus from Achalm to Lichtenstein (return)</u> |
| Thursday June 30, 2022 – Day 5 | |
| Session 12: Nanofiltration New Materials II | |
| 08:40 – 09:00 | OP 12.1: Dr. Rhea Verbeke (JGU Mainz, Germany - KU Leuven, Belgium): Epoxides as a novel platform chemistry for water purification membranes |
| 09:00 – 09:20 | OP 12.2: Dr. Joris de Groot (NXFiltration, Netherlands): Direct treatment of various water sources using hollow fiber nanofiltration membranes |
| 09:20 – 09:40 | OP 12.3: Prof. Klaus-Viktor Peinemann (KAUST, Saudi Arabia): Molecular-level design of highly selective nanofiltration membranes |
| 09:40 – 10:00 | OP 12.4: Prof. Wiebe M. de Vos (Uni Twente, Netherlands): Polyelectrolyte self-assembly for the next generation of sustainable nanofiltration membranes: From ultra-thin coatings to complete membranes |
| 10:00 – 10:20 | OP 12.5: Dr. Hannah Roth (RWTH Aachen, Germany): Composite hollow fiber nanofiltration membranes via chemistry in a spinneret |
| 10:20 – 10:30 | Discussion |
| 10:30 – 11:00 | Coffee break & poster exhibition |
| Session 13: Renewable Energy & International Development | |
| 11:00 – 11:30 | IL 13: Prof. Bryce S. Richards (IMT-KIT, Germany): Renewable energy for membrane filtration |
| 11:30 – 11:50 | OP 13.1: Prof. Mohamed Taky (UIT, Morocco): Nanofiltration powered by renewable energy for the treatment of nitrated groundwater: Case study of Sidi Taibi plant |
| 11:50 – 12:10 | OP 13.2: Dr. Laura Richards (Manchester, UK): Implementation challenges facing effective membrane-based groundwater remediation strategies in Bihar, India |
| 12:10 – 12:30 | OP 13.3: Dr. Lidia Roca (PSA, Spain): Coupling of nanofiltration with multi-effect distillation for solar-powered seawater desalination towards brine mining and water production for agriculture |
| 12:30 – 12:50 | OP 13.4: Dr. Youssef-Amine Boussouga (IAMT-KIT, Germany): Removal of inorganic contaminants (As, Se, U, NO ₃ , F) in decentralized nanofiltration |
| 12:50 – 13:00 | Discussion |
| 13:00 - 14:00 | Lunch |
| Session 14: The Potential of nanofiltration for international development | |
| 14:00 – 14:20 | OP 14.1: Prof. Saad Alami Younssi (UHII, Morocco): Preparation and characterization of flat and tubular nanofiltration membranes of polypyrrole. Application in Congo Red dye and Na ₂ SO ₄ removal |
| 14:20 – 14:40 | OP 14.2: Dr. Boukary Sawadogo (2iE, Burkina Faso): Comparative study on the performance of nanofiltration and reverse osmosis for the elimination of sulphate from well water |
| 14:40 – 15:00 | OP 14.3: Prof. Likius Daniel (UNAM, Namibia): Photocatalytic decoloration of methylene blue by Vis-responsive Ag-nanoparticles/TiO ₂ composite thin films fabricated by molecular precursor method (MPM) |
| 15:00 – 15:30 | Award of prizes to conference participants |
| 15:30 – 16:00 | <i>Closing remarks</i> |
| 16:00 | Afternoon Tea before departure |
| Friday | For our faraway guests and/or collaborators we are intending to organize some project workshops in the week after (4-6 July). Visits to IAMT will be possible on Friday 1 July and Monday 4 July, it is about a 2-hour drive/train ride. |

Liste of posters

| Nr | Title, Authors, Affiliation |
|----|--|
| 1 | Solvent tolerant nanofiltration and reverse osmosis membranes for the purification of industrial aqueous streams Salvador Cob, S. ¹ , Vandezande, P. ¹ , Wienk, I. M. ² , Cuperus, F. P. ² ¹ Flemish Institute for Technological Research (VITO), Separation and Conversion Technology, Boeretang 200, B-2400 Mol, Belgium; ² SolSep BV, St. Eustatius 65, 7333 NW Apeldoorn, The Netherlands |
| 2 | Nanofiltration of surface water with high organic content for reserve water supply Pettersen, G. W. H. ¹ , Maletskyi, Z. ² ¹ COWI Consulting and Norwegian University of Life Sciences; ² Norwegian University of Life Sciences |
| 3 | Photocatalytic Nanofiltration Reactors Molinari, R. ¹ , Argurio, P. ¹ , Giomo, L. ² , Palmisano, L. ³ , Drioli, E. ² ¹ Department of Environmental Engineering, University of Calabria, via P. Bucci, cubo 44/A, I-87036 Rende (CS), Italy ² Institute on Membrane Technology, ITM-CNR c/o University of Calabria, via P. Bucci, 17/C, I-87036 Rende (CS), Italy ³ Schiavello-Grillone Photocatalysis Group, Università degli Studi di Palermo, Dipartimento di Ingegneria (DI), Viale delle Scienze, I-90128, Palermo, Italy |
| 4 | Towards the valorization of acidic effluents from hydrometallurgical copper plants by acid-resistant polymeric nanofiltration membranes Rodríguez-Jiménez, D. ¹ , López, J. ¹ , Pastor, C. ² , Pastur, M. ² , Echevarría, C. ² , Cortina, J.L. ^{1,2} ¹ Chemical Engineering Department and Barcelona Research Center for Multiscale Science and Engineering, UPC-BarcelonaTECH (Campus Diagonal-Besòs), Barcelona, Spain; ² CETaqua, Carretera d'Esplugues 75, 08940 Cornellà de Llobregat, Spain |
| 5 | Two-dimensional materials with intrinsic microporosity Dementyev, P. Bielefeld University, 33615 Bielefeld, Germany |

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| 6 | Enhancing chloride rejection in NF for water reuse in evaporative cooling towers Kiilerich, B., Villacorte, L.O. <i>Grundfos Holding A/S, Poul Due Jensens Vej 7, 8850 Bjerringbro, Denmark</i> |
| 7 | Multi-objective operation for improving municipal wastewater regeneration with nanofiltration Roca, L. ^{1,2} , Iaconis, F. ³ , Rodríguez, F. ^{2,3} , Roccamante, M. ^{1,2} , Oller, I. ^{1,2} , Serrano, J.M. ^{1,2} , Malato, S. ^{1,2} ¹ CIEMAT-Plataforma Solar de Almería, Ctra.de Senés km 4, 04200, Tabernas, Almería, Spain; ² CIESOL, University of Almería, Ctra. Sacramento s/n, 04120, Almería, Spain; ³ Department of Informatics, CIESOL-ceiA3, University of Almería, Ctra. Sacramento s/n, 04120, Almería, Spain |
| 8 | Zeta potential analysis of nanofiltration membranes: A review Luxbacher, T. <i>Anton Paar GmbH, Graz, Austria</i> |
| 9 | Arsenic removal in water treatment via tailored anionic nanofiltration membrane Jurnalis, A.S., Ulbricht, M. <i>Technical Chemistry II, University of Duisburg-Essen, Germany</i> |
| 10 | New compact expressions for concentration-polarization of trace-ions in pressure-driven membrane processes Oren Y.S. ¹ , Freger V. ² , Nir O. ¹ ¹ Department of Desalination and Water Treatment, Zuckerman Institute for Water Research, The Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Sede-Boqer Campus 8499000, Israel ² Wolfson Department of Chemical Engineering, Technion – IIT, Haifa 32000, Israel |
| 11 | Fe-zeolite colloids as photocatalysts for PFAS removal: Degrading 'forever chemicals' Georgi, A., Qian, L., Kopinke, F.-D., Mackenzie, K. <i>Helmholtz Center for Environmental Research – UFZ, Permoserstr. 15, 04318 Leipzig.</i> |
| 12 | Lake water utilisation via HDPE intake systems Ebster, M. ¹ , Aubin, D. ² , Reinhart, R. ³ ¹ Agru Kunststofftechnik GmbH; ² Hydrokarst Swiss SA; ³ Reinhart Hydrocleaning SA |
| 13 | Photodegradation of textile pollutants in wastewater by nanocomposite membranes Nawaz, H.H. ¹ , Umar, M. ² , Liu, X. ¹ ¹ The University of Manchester; ² Graphene Engineering Innovation Centre |
| 14 | New testing protocols and evaluation models for robust evaluation and comparison of nanofiltration and reverse osmosis membranes Giagnorio, M. ² , Aschmoneit, F.J. ³ , Hélix-Nielsen, C. ² , Malaguti, M. ¹ , Tiraferri, A. ¹ ¹ Department of Environment, Land and Infrastructure Engineering (DIATI), Politecnico di Torino, Corso Duca degli Abruzzi 24, Turin, 10129, Italy; ² Department of Environmental Engineering, Technical University of Denmark (DTU), Møløvej 113, 2800 Kongens Lyngby, Denmark; ³ Department of Mathematical Sciences, Aalborg University, A. C. Meyers Vænge 15, 2450 København |
| 15 | Carbon-based functionalized materials and catalyst composites Mackenzie, K., Balda, M., Saeidi, N., Georgi, A. <i>Helmholtz Centre for Environmental Research Leipzig – UFZ, Permoserstr. 15, 04318 Leipzig, Germany</i> |
| 16 | Electrodynamics of water at the nanoscale Artemov, V. <i>École Polytechnique Fédérale de Lausanne (EPFL), CH-1015 Lausanne, Switzerland</i> |
| 17 | Enhancing polyvinylidene fluoride nanofibers membrane wetting properties by alkaline surface treatment Magdi Ahmed, M. ¹ , Hruza, J. ² , Řezanka, M. ² ¹ Faculty of Mechatronics, Informatics and Interdisciplinary Studies, Technical University of Liberec, Studentská 1402/2, 461 17 Liberec, Czech Republic; ² Institute of Nanomaterials, Advanced Technology and Innovation, Technical University of Liberec, Studentská 1402/2, 461 17 Liberec, Czech Republic |
| 18 | Separation of ions using capacitive deionization with nanofiltration membrane by N and S doped graphene quantum dot-decorated on highly ordered mesoporous carbon electrode Lin, Z.-F., Doong, R.-A. <i>Institute of Analytical and Environmental Sciences, National Tsing Hua University, 101, Sec 2, Kuang Fu Road, Hsinchu 30013, Taiwan</i> |
| 19 | Can pressure induce dehydration of ions in polyamide membranes? Peer-Haim, O., Epsztein, R. <i>Faculty of Civil and Environmental Engineering, Technion – Israel Institute of Technology, Haifa, 32000, Israel</i> |
| 20 | Selectivity of ionic species in polyamide membranes and the relation to the dehydration phenomenon Shefer, I., Pavluchkov, V., Peer-Haim, O., Epsztein, R. <i>Technion, Israel Institute of Technology</i> |
| 21 | Generation of sulfuric acid and sodium hydroxide from the sodium sulphate salt by electro-electrodialysis (EED) Zouhri, N., Ait Habzize, S., El Amrani, M., Taky, M., Elmidaoui, A. <i>Separation Process Laboratory, Department of Chemistry, Faculty of Science, Ibn Tofail University, Kenitra, Morocco</i> |
| 22 | Preparation and characterization of low-cost NaA zeolite membrane on kaolinite support Charik, F.Z. ¹ , Belgada, A. ¹ , Achiou, B. ^{1,2} , Alami Younssi, S. ¹ , Ouammou, M. ¹ , Rabillier-Baudry, M. ³ ¹ Laboratory of Materials, Membranes and Environment, Faculty of Science and Techniques of Mohammedia, Hassan II University of Casablanca, Morocco; ² Department of Chemical & Biochemical Science, Mohamed VI Polytechnic University, Ben Guerir, Morocco; ³ Univ Rennes, CNRS, ISCR (Institut des Sciences Chimiques de Rennes) - UMR 6226, F-35000, Rennes, France |
| 23 | Development of reduced graphene oxide membrane on flat Moroccan ceramic pozzolan support. Application for soluble dyes removal Karim, A. ^{1*} , Achiou, B. ¹ , Bouazizi, A. ¹ , Aaddane, A. ¹ , Ouammou, M. ¹ , Bouziane, M. ² , Bennazha, J. ¹ , Alami Younssi, S. ¹ |

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| | ¹ Laboratory of Materials, Membranes and Environment, Faculty of Sciences and Technologies Mohammedia, Hassan II University, Casablanca, Morocco.; ² Laboratory of Applied Solid Chemistry, Department of Chemistry, Faculty of Sciences, Mohammed V University, Rabat, Morocco. |
| 24 | Innovative HALAR® LMP-ECTFE membranes for the recovery of natural compounds from <i>Sambucus Nigra L.</i> by organic solvent filtration Russo, F. ¹ , Ursino, C. ¹ , Tundis, R. ² , Loizzo, M. R. ² , Cassano, A. ¹ , Donato, L. ¹ , Di Nicolò, E. ³ , Figoli, A. ¹ ¹ Institute on Membrane Technology (ITM-CNR), via P. Bucci 17/C, 87036, Rende (CS), Italy; ² Department of Pharmacy, Health Sciences and Nutrition, University of Calabria, Rende (CS), Italy; ³ Solvay Specialty Polymers Italy, Viale Lombardia 20, 20021, Bollate, MI, Italy |
| 25 | Nanofiltration vs. reverse osmosis for brackish water desalination process considering wide range of salinity: pilot scale investigation Lhassani, A.* ¹ , Dach, H. ^{1,2} , Pontie, M. ² , Nahid, O. ¹ , Boussouga, Y.A. ¹ ¹ Laboratory of Processes, Materials and Environment. Faculty of Science and Technology; University Sidi Mohamed Ben Abdellah of Fez. P.O. Box. 2202, Fez – Morocco; ² Angers University, Groupe Analyse et procédés, 2 Bd. Lavoisier, 49045 Angers, France |
| 26 | Hardness removal from groundwater by nanofiltration: experimental and modeling Elazhar, F. ¹ , Igouzal, M. ² , Hafsi, M. ³ , Taky, M. ¹ , Elmidaoui, M. ¹ ¹ Laboratory of Separation Processes, Faculty of Sciences Ibn Tofail University; ² Interdisciplinary Laboratory for Natural Resources and Environment, Faculty of Sciences, Ibn Tofail University P. O. Box 1246, Kénitra 14000 – Morocco; ³ International Institute for Water and Sanitation, National Office of Electricity and potable Water ONEE-IEA, Rabat, Morocco |
| 27 | Energy harvesting: a universal model for reverse-electrodialysis Lavi, O., Green, Y. Department of Mechanical Engineering, Ben-Gurion University of the Negev, Israel |
| 28 | Bipolar nanochannels: A systematic approach to asymmetric problem Abu-Rjal, R., Green, Y. Department of Mechanical Engineering, Ben-Gurion University of the Negev, Israel |
| 29 | Electrical circuit modelling of nanofluidic systems Sebastian, J., R., Green, Y. Department of Mechanical Engineering, Ben-Gurion University of the Negev, Israel |

List of KIT posters

| Nr | Title, Authors, Affiliation |
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| 30 | Hydrodynamic and electrostatic forces governing the membrane-organic solute interactions in asymmetric flow field flow fractionation Gopalakrishnan, A. ¹ , Bouby, M. ² , Schäfer A.I. ¹ ¹ Institute for Advanced Membrane Technology (IAMT); ² Institute for Nuclear Waste Disposal (INE), Karlsruhe Institute of Technology (KIT), Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany |
| 31 | Characterization of estradiol micropollutant breakthrough curve in nanofiltration Imbrogno, A., Schäfer, A.I. Institute for Advanced Membrane Technology (IAMT), Karlsruhe Institute of Technology (KIT), Germany |
| 32 | Micropollutants partitioning in combined magnetic ion exchange (MIEX) membrane processes Imbrogno, A., Schäfer, A.I. Institute for Advanced Membrane Technology (IAMT), Karlsruhe Institute of Technology (KIT), Germany |
| 33 | Methodology for testing photostability of polymeric photocatalyst-loaded membranes via accelerated ageing Raota, C.S. ¹ , Lofti, S. ¹ , Lyubimenko, R. ^{1,2} , Richards, B.R. ² , Schäfer A.I. ¹ ¹ Institute for Advanced Membrane Technology (IAMT); ² Institute of Microstructure Technology (IMT) Karlsruhe Institute of Technology (KIT) Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany |
| 34 | Photodegradation of organic pollutants using photosensitized membranes Raota, C.S. ¹ , Lyubimenko, R. ^{1,2} , Turshatov, A. ² , Richards, B.R. ² , Schäfer A.I. ¹ ¹ Institute for Advanced Membrane Technology (IAMT); ² Institute of Microstructure Technology (IMT) Karlsruhe Institute of Technology (KIT) Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany |
| 35 | Photocatalytic degradation of steroid hormone micropollutants by TiO₂-coated polyethersulfonemembranes in a continuous flow-through process Lofti, S. ¹ , Fischer, K. ² , Schulze, A. ² , Schäfer A.I. ¹ ¹ Institute for Advanced Membrane Technology (IAMT), Karlsruhe Institute of Technology (KIT), Eggenstein-Leopoldshafen Germany; ² Leibniz Institute of Surface Engineering (IOM), Leipzig, Germany Presenter: Himma, N.F. ¹ |
| 36 | The impact of morphology of polyethersulfone membrane on micropollutant adsorption Lin, H.Y., Schäfer, A.I. Institute for Advanced Membrane Technology (IAMT), Karlsruhe Institute of Technology (KIT), Germany |
| 37 | Interference of organic matter with steroid hormone removal by single walled carbon nanotube – ultrafiltration composite membrane Nguyen, M.N., Hervás-Martínez, R., Schäfer, A.I. Institute for Advanced Membrane Technology (IAMT), Karlsruhe Institute of Technology (KIT), Germany |
| 38 | Adsorption of steroid hormone micropollutants in the nanoconfinement of vertically aligned single-walled carbon nanotube membranes Nguyen, M.N. ¹ , Jue, M.L. ² , Buchsbaum, S.F. ² , Park, S.J. ² , Fornasiero, F. ² , Schäfer A.I. ¹ |

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| 39 | Removal of glyphosate (GLY) by polymer-based spherical activated carbon (PBSAC) Trinh, P.B., Schäfer, A.I. Institute for Advanced Membrane Technology (IAMT), Karlsruhe Institute of Technology (KIT), Germany |
| 40 | Nitrate removal from brackish water by electrodialysis Ramos, R.L. ¹ , Shirdast, S. ^{1,2} , Aliaskari, M. ¹ , Rosentreter, H. ² , Lerch, A. ² , Schäfer, A.I. ¹ ¹ Institute for Advanced Membrane Technology (IAMT), Karlsruhe Institute of Technology (KIT), Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany; ² Technische Universität Dresden, Chair of Process Engineering in Hydro Systems, Germany |
| 41 | Spontaneous osmotic backwash for fouling control in batteryless photovoltaic powered nanofiltration/reverse osmosis systems Cai, Y., Schäfer, A.I. Institute for Advanced Membrane Technology (IAMT), Karlsruhe Institute of Technology (KIT), Germany |
| 42 | Insights into the removal of selenium and arsenic by nanofiltration in the presence of organic matter Boussouga, Y.A., Gopalakrishnan, A., Schäfer, A.I. Institute for Advanced Membrane Technology (IAMT), Karlsruhe Institute of Technology (KIT), Germany |
| 43 | Resilience of photovoltaic-powered membrane filtration system for fluoride removal from brackish water Boussouga, Y.A. ¹ , Richards, B.S. ² , Schäfer, A.I. ¹ ¹ Institute for Advanced Membrane Technology (IAMT); ² Institute of Microstructure Technology (IMT) Karlsruhe Institute of Technology (KIT) Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany |
| 44 | Selectivity of artificial water channel-polyamide composite membranes towards inorganic contaminants Joseph, J. ¹ , Boussouga, Y.A. ¹ , Di Vincenzo, M. ² , Barboiu, M. ² , Schäfer, A.I. ¹ ¹ Institute for Advanced Membrane Technology, Karlsruhe Institute of Technology, Germany ² Institut Européen des Membranes, University of Montpellier, France |
| 45 | Energy barriers for steroid hormones transport in nanofiltration Allouzi, M., Imbrogno, A., Schäfer, A.I. Institute for Advanced Membrane Technology, Karlsruhe Institute of Technology, Germany |
| 46 | Poly(vinylidene fluoride) membrane with immobilized TiO₂ for degradation of low concentrated steroid hormones in a photocatalytic membrane reactor Liu, S. ¹ , Véron, E. ¹ , Lotfi, S. ¹ , Fischer, K. ² , Schulze, A. ² , Schäfer, A.I. ¹ ¹ Institute for Advanced Membrane Technology, Karlsruhe Institute of Technology, Germany; ² Leibniz Institute of Surface Engineering (IOM), Permoserstr. 15, D-04318 Leipzig, Germany |
| 47 | Energy storage options for photovoltaic-powered membrane filtration systems for desalination of brackish water Richards, B.S. ¹ , Schäfer, A.I. ² , ¹ Institute of Microstructure Technology (IMT), Karlsruhe Institute of Technology (KIT), Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany; ² Institute for Advanced Membrane Technology (IAMT), Karlsruhe Institute of Technology (KIT), Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany Presenter: Ogunniyi, E. ¹ |