

# Network Young Membrains Meeting 2022

## PROGRAM



**Thursday, 17<sup>th</sup> November 2022**  
*Session 1*

14:00 14:30

**Welcome Message**

14:30 15:00

**Francesco M. Benedetti**  
*Starting a company from a research project*

15:00

15:13

**Akkoyunlu Burcu**  
*Membrane bioreactors to produce polyhydroxyalkanoate (PHA) from gaseous feedstocks*

Green processes

15:13

15:26

**Alcalde Berta**  
*Polymer inclusion membranes for the extraction of antibiotics from water*

Water treatment

15:26

15:39

**Andrea Torre Celeizabal**  
*Chitosan based composite membranes for CO<sub>2</sub>/CH<sub>4</sub> separation. Experimental and model evaluation*

Gas separation

15:39

15:52

**Anna Volz**  
*A tunable fabrication method towards catalytic polymer-based porous multi-composite membranes with promising properties for pollutant degradation and hydrogen production*

Membrane preparation

15:52

16:05

**Mohammadamin Esmaeili**  
*Antifouling recycled-membranes modified by polyelectrolyte multilayer in pulp and paper*

Water treatment

16:05

16:18

**Eryildiz Bahriye**  
*Fate, environmental impact and treatability of antiviral drugs*

Energy

16:18

16:31

**Bastian Kirkebæk**  
*3D printing in the field of membrane distillation and membrane crystallization*

Membrane preparation

16:31

16:44

**Carmen M. Sánchez-Arévalo**  
*An integrated membrane process to recover polyphenols from wet olive pomace*

Green processes

16:44

16:57

**Anastasiia Lopatina**  
*Effect of low concentrations of lithium chloride additive on cellulose-rich ultrafiltration membranes performance*

Water treatment

## Coffee break

**Thursday, 17<sup>th</sup> November 2022**

*Session 2*

**Gabriela Santos Medeiros**

17:30 17:43 *Gas transport properties of hollow fibers membranes for CO<sub>2</sub> separation based on poly(ether-block-amide) copolymers*

Gas  
separation

**Giuseppe Di Luca**

17:43 17:56 *Bio-sustainable membranes for potential water treatment applications*

Membrane  
preparation

**Taqwa Zouaoui**

17:56 18:09 *Graphene based membranes to massively reduce energy in the oil, gas and chemical industry*

Energy

**Hao Boyuan**

18:09 18:22 *Organic liquid mixture separation using fluorinated covalent organic framework (COFs) supported crosslinked polyvinylidene fluoride (PVDF)*

Water  
treatment

**Dániel Gardenö**

18:22 18:35 *Synthesis and characterization of membranes based on carbon-based 2D materials for H<sub>2</sub> separation from gas mixtures*

Gas  
separation

**Sascha Fahlberg**

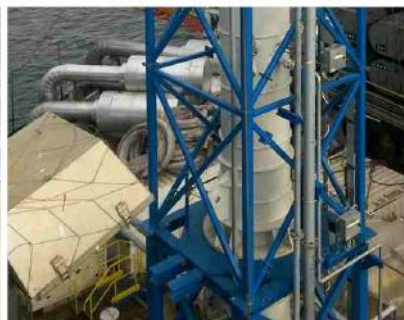
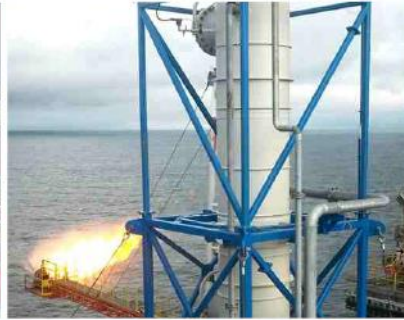
18:35 18:48 *Efficient and sustainable membrane platform development for microfiltration applications*

Modelling

**Friday, 18<sup>th</sup> November 2022**

**07:30**

**Visit to Cannon Artes S.p.A.**



**13:30**

**Lunch**

**Friday, 18<sup>th</sup> November 2022**

*Session 3*

**Rocio Semino**

14:30 15:00 *Modelling interfaces and self-assembly of porous materials*

**Chunchun Ye**

15:00 15:13 *Development of efficient aqueous organic redox flow batteries using ion-sieving sulfonated polymer membranes*

Energy

**Vatsha Banele**

15:13 15:26 *Organic solvent separation using a hybrid of size-controlled porous organic polymer and polyethersulfone membrane*

Water Treatment

**Sneha De**

15:26 15:39 *Investigation of spray-coated novel low-fouling layer with PBM materials on UF PES membranes*

Membrane preparation

**Tomislav Horvat**

15:39 15:52 *Performance optimisation of curly hollow membrane modules using CFD*

Modelling

**Triantafyllia Grekou**

15:52 16:05 *Post-synthesis modification of silica membranes for enhanced CO<sub>2</sub> capture from flue gas streams*

Gas separation

**Madenli Evrim Celik**

16:05 16:18 *Polyphenol recovery by ceramic membranes*

Green processes

**Joona Nieminen**

16:18 16:31 *Emerging prospects of charge-enhanced ultrafiltration membranes*

Water treatment

**Jan Cizek**

16:31 16:44 *Preparation of enantioselective membranes through simple functionalization by chiral ionic liquid*

Membrane preparation

**Shahla Radmehr**

16:44 16:57 *Studying the effects of single and mixed algae strains on performance of algae-sludge membrane bioreactors*

Green processes

**Coffee break**

**Friday, 18<sup>th</sup> November 2022**

*Session 4*

17:30	17:43	<b>Lettieri Melania</b> <i>Functionalizing polyether-ether-ketone polymer for preparing more performing pervaporative dense membranes</i>	Membrane preparation
17:43	17:56	<b>Mutto Abeer</b> <i>Membranes for bio-fuel recovery: deciphering membrane permeation in multicomponent pervaporation</i>	Green processes
17:56	18:09	<b>Ilaria Rizzardi</b> <i>Hydrophobic membrane bubble free aerator applied in MABR for simultaneous ammonia and COD removal</i>	Water treatment
18:09	18:22	<b>Enise Pekgenc</b> <i>Development of biocatalytic membrane systems for the control of biofouling in reverse osmosis and ultrafiltration membrane systems</i>	Green processes

**20:00**

**Social dinner**

**Saturday, 19<sup>th</sup> November 2022**

*Session 5*

**Cejna Anna Quist-Jensen**

08:30 09:00 *Membrane crystallization - Potential, process, and membrane design*

**Vadim Ippolitov**

09:00 09:13 *Cellulose membranes in the treatment of Deep Eutectic Solvents (DESs)*

Green processes

**Kulkarni Akshay**

09:13 09:26 *Coating of polymer membranes with photoactive nanoparticles and studies on degradation of water pollutants*

Water treatment

**Virginia Guiotto**

09:26 09:39 *F-MOF-based matrix mixed membranes for an energetically favourable separation of CO<sub>2</sub>*

Gas separation

**Martinez Malinalli Ramirez**

09:39 09:52 *Polyolefin membranes fabricated with bio-based solvents: from plastic waste to value-added materials*

Membrane preparation

**Martina Gaglianò**

09:52 10:05 *Phenolic compounds enhancement and sugar reduction in apple juice by diananofiltration*

Green processes

**Pegah Hajivand**

10:05 10:18 *Olefin/paraffin separation by MOF-based mixed matrix membranes*

Gas separation

**Sven Johann Bohr**

10:18 10:31 *From hollow fibre to flat sheet - How to develop membranes with similar properties and different shapes*

Membrane preparation

**Coffee break**

**Saturday, 19<sup>th</sup> November 2022**

*Session 6*

		<b>Sorcha Daly</b>	
11:00	11:13	<i>Membrane fouling during continuous production of lactic acid with cell recycle</i>	Green processes
		<b>Keskin Başak</b>	
11:13	11:26	<i>Precious metal recovery applications of polymer inclusion membranes</i>	Water treatment
		<b>Xiong Chen</b>	
11:26	11:39	<i>Porous PVDF membrane with controllable wetting property in oil water emulsion separation</i>	Membrane preparation
		<b>Maria Francesca Vigile</b>	
11:39	11:52	<i>Polymerizable bicontinuous microemulsion as anti-fouling coatings for PES and PVDF membranes for wastewater treatment</i>	Water treatment
		<b>Rebecca Esposito</b>	
11:52	12:05	<i>Rheology of polytriazole/ZIF-8 solutions and dynamics of mixed-matrix composite films</i>	Membrane preparation
		<b>Sven Kroß</b>	
12:05	12:18	<i>Polymeric fluorine-free ionomers and their complexes with polyelectrolytes for thin-film composite nanofiltration membranes</i>	Water treatment
		<b>Merve Yilmaz</b>	
12:18	12:31	<i>Life cycle environmental and economic assessment of AnFOMBRs and AnMBRs</i>	Modelling
		<b>Valentina Tortelli</b>	
12:31	13:00	<i>HORIZON Europe MSCA for Young Researchers: Focus on Postdoctoral Fellowships and Career Opportunities</i>	
<b>13:00</b>	<b>13:30</b>	<b>Final remarks, prizes, and closure of NYM 2022</b>	
<b>13:30</b>	<b>Lunch</b>		