ICCMR11 Detailed Scientific Programme

Sunday :: July 07	
17:00	**Registration & Welcome Reception**

Monday :: July 08			
8:30	**Opening Ceremony**		
9:00	**PL1: Gilbert Rios** in tandem with **Alexander Netrusov** **Chair: Corinne Cabassud** **Perspectives and opportunities for bio-catalytic membrane reactors in a bio-based economy // Biological membrane reactors**		
Session 1A – MRs and Biocatalysis (Room 105) **Chairs: Corinne Cabassud/Gilbert Rios**		**Session 1B – Photocatalytic MRs (Room 022)** **Chairs: Adélio Mendes/Sylwia Mozia**	
10:00	**K1: Chung-Hak Lee** **Paradigm shift in biofouling control in MBR: biocatalytic quorum quenching**	10:00	**K2: Sylwia Mozia** **A comparison of the performance of two photocatalytic membrane reactors for treatment of primary and secondary effluents**
10:30	**O1: Matthias de Cazes** **Design and optimization of an enzymatic membrane reactor for the degradation of pharmaceutical micropollutants**	10:30	**O6: Xie Liping** **Study on the basic performance of three-phase fluidized bed equipment of solar photocatalysis-organic membrane separation**
10:50	**O2: Chengcheng Li** **The impact of peak concentration of micropollutants on fouling of membrane bioreactor treating municipal wastewater intended for water reuse**	10:50	**O7: Benoît Heinrichs** **How to correctly determine the kinetics of pollutant degradation in water over a photocatalytic film?**
11:10	**Coffee Break**		
Chairs: Chung-Hak Lee/Alexander Netrusov		**Chairs: Sylwia Mozia/Benoît Heinrichs**	
11:40	**O3: Endre Nagy** **On mass transport through a biocatalytic membrane reactor**	11:40	**O8: Damon Rafieian** **Photocatalytic degradation of cortisone acetate in a PDMS-based microreactor**
12:00	**O4: Cláudia Galinha** **Monitoring key process parameters of membrane bioreactors using 2D fluorescence spectroscopy and statistically-based modelling tools**	12:00	**O9: Jianqiang Meng** **Synthesis of catalytic propylene membranes for photocatalytic degradation of dye solutions**
12:20	**O5: Lidietta Giorno** **Multiphasic bioreactive system based on membrane technology for the production of high added value water unstable intermediate reaction**	12:20	**O10: Zhao Kongyin** **Adsorption, photocatalytic degradation and filtration of methyl orange imprinted composite membranes using TiO_2/Calcium alginate hydrogel as matrix**

12:40	**Lunch**		
Session 2A – MRs Modeling and Simulation (Room 105) **Chairs: Theodore Tsotsis/Naotsugu Itoh**		**Session 2B – Reactors with Polymeric Membranes (Room 022)** **Chairs: Lidietta Giorno/Detlev Fritsch**	
14:00	**O11: Hui Li** Experimental and modeling study of gas transport through composite ceramic membranes	14:00	**K4: Detlev Fritsch** Potentials of polymer membranes for membrane reactors
14:20	**O12: Nazely Diban** Chemical valorization of CO_2 in a DME catalytic synthesis using a packed-bed membrane reactor with zeolite membranes for in situ water removal	14:30	**O18: Luis F. Villalobos** Catalytic nanocomposite membrane: in-situ growth of well-dispersed, uniform and stable gold nanoparticles in a polymeric membrane
14:40	**O13: Ekaterina V. Shelepova** Comparison of dense and porous membranes for dehydrogenation of ethyl-benzene in catalytic membrane reactor	14:50	**O19: Clélia Emin** Elaboration of metal nanoparticles loaded polymeric membrane for catalytic membrane reactor application
15:00	**O14: Giuseppe Barbieri** Non conventional analysis of the performance of a membrane reactor for hydrogen upgrading	15:10	**O20: Adela Eguizabal** Microtransfer molded PBI as macroporous membrane for energy and reaction applications
15:20	**O15: Hamid R. Godini** Dual membrane reactor for methane oxidative coupling and dry methane reforming	15:30	**O21: Panagiotis Boutikos** Pervaporation membrane reactor for DBE synthesis
Session 3A – MRs for Synthesis Applications (Room 105) **Chairs: Vladimir Volkov/Miguel Torres**			
15:40	**O16: Anton Dafinov** Chemical oxidation of water contaminants by in-situ generated chemical oxidants: a novel advanced oxidation approach based on three phase membrane reactors	15:50	**O22: Joaquim Vital** PVA composite catalytic membranes for hyacinth flavour synthesis in a pervaporation membrane reactor
16:00	**O17: Ali A. Babaluo** Effect of operating conditions on nC_5 isomerization over Pt/SZ nano catalyst in zeolite based membrane reactor	16:10	**O23: Ludmila Peeva** Potential of organic solvent nanofiltration in continuous catalytic reactions
16:20	**K3: Alírio Rodrigues** Integrating simulated moving bed reactor and membrane technologies: the PermSMBR concept.		
16:50	**Poster Session I**		
19:30	**Reception Cocktail - Port wine party in the Solar Vinho do Porto gardens**		

Tuesday :: July 09

8:30 — **PL2: King Lun Yeung** — **Chairs: João Crespo/Jesus Santamaria**
Membrane innovation in micro, mini and macro systems

Session 4A – New Design and Concepts - Membrane Catalyst Design (Room 105) Chairs: João Crespo/Miguel Menendez		Session 3B – Ion-Conducting MRs - ElectroChemical Synthesis (Room 022) Chairs: Jianxin Li/Alexandros Katsaounis	
9:30	**K5: Jesus Santamaria** Emerging applications for nanostructured membranes and coatings in gas sensors	09:30	**K7: José Sanchez Marcano** Modelling of mass and energy transfers in a high temperature membrane electrolyser
10:00	**O24: Miguel A. Bañares** Fabrication of zeolite membrane microreactor for carbonylation of glycerol with urea	10:00	**O29: Michail N. Tsampas** Electrochemical promotion of catalysis mechanistic studies utilizing isotopical labeling
10:20	**O25: Valeriy A. Kirillov** Development of a structured metal-porous catalyst for the hydrocarbon fuel reforming in the reactor with membrane separation of hydrogen	10:20	**O30: Jesús González-Cobos** H_2 production from methanol by electrochemical promotion of metallic catalysts using cationic solid electrolytes
10:40	**O26: Desiree van Holt** Catalytic membrane reactor for water gas shift reaction in the pre-combustion process for carbon capture applications	10:40	**O31: Esperanza Ruiz** Electrochemical synthesis of fuels by CO_2 hydrogenation on Cu in a potassium ion conducting membrane reactor at bench scale
11:00	**Coffee Break**		
Chairs: Miguel Bañares/Jesus Santamaria		**Chairs: José Sanchez Marcano/Tanja Vidaković-Koch**	
11:30	**O27: Xiongfu Zhang** Core-shell Pd/ZSM-5@ZIF-8 membrane microreactors with shape selectivity properties for alkene hydrogenation	11:30	**O32: Jianxin Li** Electrocatalytic oxidation of 2,2,3,3-Tetrafluoro-1-Propanol to produce sodium tetrafluopanate by an electrocatalytic membrane reactor
11:50	**O28: Tim Boeltken** Microstructured reactors with integrated palladium membranes for hydrogen generation	11:50	**O33: Alexandros Katsaounis** CO_2 Hydrogenation Over Ru/YSZ Electropromoted Catalysts in a High Pressure Reactor
12:10	**K6: João G. Crespo** Membranes and ionic liquids: (not) always a love affair	12:10	**O34: Alexandros Katsaounis** Electrochemical Promotion of CO_2 Hydrogenation on Ru/β"-Al_2O_3 (Na^+)
12:40	**Lunch**		

14:00 — **Session on European Projects related to the conference topics (Room 105)** — **Chairs: Roland Dittmeyer/Jean Claude Charpentier**

Nasa-Otm	Stefan Baumann
Demcamer & Carena	Fausto Gallucci & Arend de Groot
BeingEnergy	Adélio Mendes
Endetech	Jose Sanchez Marcano
Bioart	Lidietta Giorno
BioConSept & BioNexGen & Nano4Water	Gilbert Rios

17:00 — **Poster Session II**

Wednesday :: July 10

8:30	**PL3: Tanja Vidaković-Koch** **Chairs: Kang Li/Ian Metcalfe** **Beyond fuel cells: current prospects and challenges in electrochemical membrane reactors**		
Session 5A – New Design and Concepts - Reactor design (Room 105) **Chairs: Kang Li/Valeriy Kirillov**		**Session 5B – Ion-Conducting MRs - Mix. Ionic and Electr. Cond. Memb. (Room 022)** **Chairs: Frans van Berkel/Ian Metcalfe**	
9:30	**K8: Theodore T. Tsotsis** A **multifunctional membrane reactor based system for the protection against chemical warfare agents**	09:30	**K9: José M. Serra** **In situ hydrogen separation at high temperatures through highly-stable mixed proton conducting membranes**
10:00	**O35: Francisco R. Garcia-Garcia** **Design and development of new symmetric and asymmetric ceramic hollow fibre catalytic enhanced reactors**	10:00	**O42: Nur Hidayati Othman** **Micro-structured $Bi_{1.5}Y_{0.3}Sm_{0.2}O_{3-\delta}$(BYS) catalyst and hollow fibre for oxidative coupling of methane (OCM)**
10:20	**O36: Masahiro Kajitani** **Improvement in the durability for hydrogen production module based on membrane on catalyst**	10:20	**O43: Marie Rochoux** **Prediction of oxygen flux in mixed ionic-electronic oxygen conducting membranes**
10:40	**O37: Martin van Sint Annaland** **Gas back-mixing and hydrodynamics in micro-fluidized bed membrane reactors**	10:40	**O44: Julio Garcia-Fayos** **Oxygen separation through ceramic membranes based on catalytically-activated $La_{0.58}Sr_{0.4}Co_{0.2}Fe_{0.8}O_{3-\delta}$**
11:00	**Coffee Break**		
Chairs: Martin van Sint Annaland/King Lun Yeung		**Chairs: Stefan Baumann/Rosa Martin-Aranda**	
11:30	**O38: Arash Helmi** **Membrane assisted fluidized bed reactor for water gas shift reaction**	11:30	**O45: Luca Di Felice** **Simultaneous autothermal reforming of methane (ATR) and O_2 separation via hollow fibre perovskite membranes in a membrane reactor: experimental data and reactor modeling**
11:50	**O39: Ana Gil** **A functional hollow fibre substrate for catalytic membrane micro-reactors**	11:50	**O46: Tao Li** **Single-step fabrication of triple-layer ceramic hollow fibers for micro-tubular solid oxide fuel cells**
12:10	**O40: José A. Medrano** **Dual process intensification: membrane reactor coupled to a two-zone fluidized bed reactor (TZFBR) for the catalytic propane dehydrogenation**	12:10	**O47: Lori Nalbandian** **Perovskite dense membrane reactor for chemical-looping reforming and hydrogen production**
12:30	**O41: Lucia Marra** **ATR over Rh/ZrO_2 catalyst in a membrane micro-reactors**	12:30	**O48: Natalia Mezentseva** **Design of asymmetric supported oxygen-transport membranes on binary Ni-Al substrates for oxygen separation and syngas generation from hydrocarbons**
12:50	**Lunch**		
14:00	**Visit to the city of Guimarães: Meeting point to depart for the restaurant - Largo 25 Abril (number 4, in the map)**		
19:30	**Conference Dinner: Quinta de Paredes. Address - Rua de Paredes, 150, Codessos - Paços de Ferreira**		

Thursday :: July 11	
8:30	**PL4: Roland Dittmeyer** in tandem with **Nicole Schödel** **Chairs: Arend de Groot/Rune Bredesen** **Reactors with hydrogen permeable membranes – State-of-the-art and new ideas**
Session 6A-Pd-Based MRs (Room 105)	
9:30	**O49: Eduardo A. Lombardo** **Optimum Pt load of catalysts used to obtain pure H_2 from an ethanol reformate type stream in a Pd-membrane reactor**
9:50	**O50: Shigeyuki Uemiya** **Novel fabrication technique of Pd-based composite membrane using photolithography**
10:10	**O51: Fiorenza Azzurri** **Thin alumina barrier layers on porous stainless steel tubular supports with improved superficial roughness for temperature resistant palladium membranes**
10:30	**O52: Andreas Goldbach** **Long-term performance of palladium membranes under high-pressure, high-recovery water gas shift reactor conditions**
10:50	**Coffee Break**
Chairs: Eduardo Lombardo/Fausto Gallucci	
11:20	**O53: Jordi Llorca** **Ethanol steam reforming in a catalytic membrane reactor loaded with a hydrotalcite-derived cobalt catalyst**
11:40	**O54: Andrey Yaroslavtsev** **CO-free hydrogen production by ethanol steam reforming over metal/nanodiamond catalysts in membrane reactor**
12:00	**O55: Fernando Braun** **PdAgAu alloy membrane with improved sulfur tolerance and permeability**
12:20	**O56: Rune Bredesen** **Microchannel-supported thin Pd-alloy membranes – application in membrane micro-reactors for methane steam reforming and propane dehydrogenation processes**
12:40	**Lunch**
Chairs: Andrey Yaroslavtsev /Angelo Basile	
14:00	**O57: Frans P. F. van Berkel** **Towards the large scale methanol production using catalytic Pd membrane reactors**
14:20	**O58: David A. P. Tanaka** **Preparation and characterization of thin Pd based membranes supported on porous alumina tube by PVD magnetron sputtering**
14:40	**O59: Hideto Kurokawa** **The effect of CO on hydrogen permeability of Pd-Ag membrane**
14:40	**O60: Fabio B. Noronha** **Pd-Ag based membrane for H_2 purification from ethanol steam reforming over Rh catalysts**
15:00	**Concluding Remarks: Closing Speech and Awards Ceremony**