INTERNATIONAL WORKSHOP
INORGANIC MEMBRANE TECHNOLOGY- Advanced Production and Design
27-28 March 2012

Conference location: CNRS Amphitheatre, 1919 Route de Mende, 34293 Montpellier cedex 5
Lunches: Institut Européen des Membranes, 300 Avenue du Professeur Emile Jeanbrau, 34095 Montpellier, Tel. +33 4 67 14 91 00
Dinner (March 27th - City Center): Musée Fabre, 13 rue Montpelliéret, 34000 Montpellier, Tel. +33 4 67 14 83 00

DAY 1- March, 27th 2012 Dense ion-conducting ceramic membranes - Membrane reactors - Inorganic Fibers		
08:15 - 09:00	*Registration- Coffee*	
09:00 - 09:10	**Welcome & Introduction**	**Anne JULBE & André AYRAL** *IEM, Université Montpellier 2-ENSCM-CNRS, France*
09:10 - 09:20	**Presentation of the IMeTI project-*Implementation of Membrane Technology to Industry***	**Ludmila PEEVA** *Imperial College – London, United Kingdom*
09:20 - 09:30	**Presentation of the CARENA project-*CAtalytic REactors based on New mAterials***	**Arend de GROOT** *Energy research Centre of the Netherlands, Petten, The Netherlands*
09:30 - 10:20	**Key-Note Lecture** **Dense mixed ion-electron conducting ceramic membranes – from theory and laboratory to application**	**Truls NORBY[1, 2]**, R. JALARVO[1], N. SHAROVA[1], I. LORENTZEN[1], S. ERDAL[3], C. KJØLSETH[3] [1] *NorECs AS, Oslo, Norway* [2] *University of Oslo, FERMiO, Norway* [3] *Protia AS, Oslo, Norway*
10:20 - 10:45	**Asymmetric membrane structures for high performance oxygen transport membranes**	**Wilhelm A. MEULENBERG[1]**, S. BAUMANN[1], J.M. SERRA[2] [1] *Forschungszentrum Jülich GmbH, IEK-1, Germany* [2] *ITQ, Universidad Politécnica de Valencia – CSIC, Spain*
Coffee-Break		
11:15 - 11:40	**Strategies of production for dense ceramic oxygen and hydrogen transport membranes**	**Christian GUIZARD[1]**, A. STEVENSON[1], S. RICHAUD[1], C. TARDIVAT[1], E. NONNET[2] [1] *LSFC, CNRS/Saint-Gobain, Cavaillon, France* [2] *Saint-Gobain CREE, Cavaillon, France*
11:40 - 12:05	**Self-assembly of protonic ceramic membranes by solid-state reactive sintering**	**W. Grover COORS[1]**, A. MANERBINO[1,2], S. ROBINSON[2], N. SULLIVAN[2] [1] *CoorsTek, Inc. Golden, Colorado USA* [2] *Colorado Fuel Cell Center, Golden, Colorado, USA*
12:05 - 12:30	**Development of tubular thin film ceramic membranes for high temperature gas separation**	**Marie-Laure FONTAINE,** D. MOSTAFA, P.I. DAHL, Y. LARRING, P. P. HENRIKSEN, R. BREDESEN *SINTEF Materials and Chemistry, Oslo, Norway*
Buffet Lunch and Poster Session – IEM site		
14:30 - 14:55	**Catalytic membrane reactors based on dense ceramic membranes**	**Christian KJØLSETH[1]**, S. ERDAL[1], P.K. VESTRE[1], Z. LI[2], A. GORZKOWSKA-SOBAS[2], R. HAUGSRUD[2], S. SVELLE[3] [1] *Protia AS, Oslo, Norway* [2] *University of Oslo, FERMiO, Norway* [3] *University of Oslo, InGAP, Norway*
14:55 - 15:20	**Sealing of inorganic membrane reactors - Challenges and opportunities**	**Michael BUDD** *Sirius Tech AS, Porsgrunn, Norway*
15:20 - 15:45	**Conceptual design of membrane reactors**	**Hank VLEEMING**, R.ROELANT *Process Design Center B.V., Breda, The Netherlands*
15:45 - 16:10	**Design of SOFC and SOEC membranes: contribution of modeling and numerical simulations**	**Gérard DELETTE[1]**, R. LAUCOURNET[1], E. BOUYER[1], C.L. MARTIN[2] [1] *CEA-LITEN, Grenoble, France* [2] *INP, UJF-CNRS, Saint Martin d'Hères, France*
Coffee-Break		
16:40 - 17:05	**Ceramic hollow fibre membranes and their applications**	**Kang LI** *Imperial College- London, Great Britain*
17:05 - 17:30	**Thin inorganic hollow fiber microreactors**	H.C. ARAN, S. PACHECO BENITO, M.W.J. LUITEN-OLIEMAN, S. ER, M. WESSLING, L. LEFFERTS, **Nieck E. BENES,** R.G.H. LAMMERTINK *Mesa+ Institute for NanoTechnology, University of Twente, Enschede, The Netherlands*
17:30 - 17:55	**Polymer-derived hollow Si-based ceramic fibers: design, processing and properties**	**Samuel BERNARD,** P. MIELE *IEM, Université Montpellier 2-ENSCM-CNRS, France*
19:45	*Conference diner – Musée Fabre, City Center*	

DAY 2- March 28th 2012 Dense Pd-based membranes - Porous hybrid and ceramic membranes		
09:00 - 09:25	**Inorganic membrane research and development at Shell**	**Arian NIJMEIJER**[1], J.C. SAUKAITIS[2], E. ENGWALL[2], P. VEENSTRA[1], P. J. WILLIAMS[2], A.A. Del PAGGIO[3] *[1] Shell Global Solutions International B.V., Amsterdam, The Netherlands* *[2] Shell Global Solutions Inc. and Shell International Exploration and Production, Houston, TX, USA* *[3] CRI, Houston, TX, USA*
09:25 - 09:50	**Pd-based membranes in H_2 production and CO_2 capture processes: status at SINTEF**	**Thijs A. PETERS**,T. KALETA,M. STANGE, R. BREDESEN *SINTEF Materials and Chemistry, Oslo, Norway*
09:50 - 10:15	**Pd-based membranes in pure hydrogen production**	**Giuseppe BARBIERI**[1], A. CARAVELLA[1], E. DRIOLI[1,2], A. BRUNETTI[1] *[1] ITM–CNR, The University of Calabria, Rende, Italy* *[2] The University of Calabria, Rende, Italy*
Coffee-Break		
10:45 - 11:10	**Ceramic membranes for vapour permeation and gas separation**	**Ingolf VOIGT**, H. RICHTER, R. KRIEGEL, M. WEYD Fraunhofer Institute for Ceramic Technologies and Systems IKTS, Hermsdorf, Germany
11:10 - 11:35	**New direction for the HybSi membrane concept and process options for the fabrication of acetals**	**Jaap VENTE**[1], R. KREITER[1], H. CASTRICUM[2], G. PARADIS[1], M. RIETKERK[1], J. TEN ELSHOF[2], H. VAN VEEN[1], I. AGIRRE[1,3], P. ARIAS[3] *[1] Energy research Centre of the Netherlands, Petten, The Netherlands* *[2] Universiteit Twente, Enschede, The Netherlands* *[3] Engineering School of Bilbao, Bilbao, Spain*
11:35 - 12:00	**Scale-up of SAPO-34 membranes for CO_2/CH_4 separation**	E. PING[1], R. ZHOU[1], H.H. FUNKE[1], C. RAMACHANDRAN[2], B. MURRAY[2], J. MAYNE[2], P.J. WILLIAMS[3], J. L. FALCONER[1], **Richard D. NOBLE**[1] *[1] University of Colorado, Boulder, CO, USA* *[2] CRI US LP, Houston, TX, USA* *[3] Shell International Exploration and Production Inc., Houston, TX , USA*
Buffet Lunch and Poster Session- IEM site		
14:00 - 14:25	**How to prepare better zeolite and MOF membranes?**	**Jurgen CARO** *Leibniz University Hannover, Germany*
14:25 - 14:55	**CO_2/N_2 separation in real condition on an ultramicroporous MOF tubular membrane (SIM-1): Effect of pore size and process evaluation**	S. AGUADO, **David FARRUSSENG** *IRCELYON, Université Lyon 1, CNRS, Villeurbanne, France*
14:55 - 15:20	**Design of microporous ceramic membranes and their potential scale-up on industrial supports**	M. DROBEK[1], J. MOTUZAS[1], V. ROUESSAC, A. AYRAL[1], R. A. TERPSTRA[2], **Anne JULBE**[1] *[1] IEM, Université Montpellier 2-ENSCM-CNRS, France* *[2] Hyflux CEPAration Technologies (Europe), Helmond, The Netherlands*
15:20 - 15:45	**Ceramic membranes for gas separation: challenges to industrialization**	**Didier DHALER,** *CTI SA, Salindres, France*
15:45 - 16:10	**Literature on inorganic membranes for gas separation and catalytic reactors: some figures and trends**	**Pierre AIMAR,** JMS Editor *LGC, Université de Toulouse, France*
Closing remarks		