

Tarragona International Forward Osmosis Workshop (TIFOW 2014).

Forward osmosis (FO) is a technology where water molecules migrate by diffusion, without energy input, into a more concentrated “draw solution.” Energy for the process is supplied by osmotic pressure difference of the two solutions. FO has new applications in separation processes for waste water treatment, food processing, energy production, drug release or water desalination. Among these, the energy application for electricity production is called retarded osmosis and is the application of the natural phenomena by placing membranes between salty and non-salty water streams.

Even though reverse osmosis applications are well known and in a very mature development, direct or retarded osmosis is still a very young technology either in research fields or industry. We organize this workshop with the intention of training researchers and innovators in and for industry. This workshop brings two main speakers who are international experts on Forward Osmosis (FO) from different points of view. The first one, Steve Gluck is a Fellow in Dow Water & Process Solutions R&D. He is responsible for Growth Platform technology diligence and scouting in water and wastewater markets beyond established business markets. Dr. Gluck will give a scope on the industry interest and the main applications on the field. The second one, Dr Jeffrey McCutcheon is an associate professor at the University of Connecticut running a dynamic research laboratory in the Chemical & Biomolecular Engineering Department. His research area is focused on membrane separations, primarily in salinity gradient processes. He also serves on the North American Membrane Society Board of Directors and am a Division Director in the American Institute of Chemical Engineers Separations Division. Dr. McCutcheon will give a wide presentation from the research point of view and the future applications.

This workshop is one of the activities of the New Indigo ERA NET Project “Enzyme supplemented membrane bioreactor for degradation of recalcitrant compounds in industrial wastewater”, which has been funded by the EU Commission and the Governments of India, Belgium and Spain (Ministry of Economy and Competitiveness, Fellowship PCIN-2013-066). The partners of the project are the Energy and Resources Resources from New Deli (India), Katholic Univeristy of Leuven, KUL (Belgium) and Center for Chemical Technology of Catalonia (Spain).

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It is within this context that we organize the Tarragona International Forward Osmosis Workshop (TIFOW 2014), a great moment to learn and exchange knowledge about Forward Osmosis.

Agenda

December 11, arrival and social dinner

December 12:

9:30 Reception

10:00 Welcome by Fernando Torres, CTQC's CEO

10:05 Presentation by Dr. Ricard Garcia-Valls, team leader at CTQC and associate professor at University Rovira i Virgili

10:15 Presentation from Dr. Gluck (DOW): Industrial approach to FO

11:15 Coffee Break

11:30 Presentation from Dr McCutcheon on Research and academic approach to FO

12:30 Open round table discussion

13:10 Lunch

14:30 Short presentations on Membrane applications for water treatment (20 minutes presentations and/or posters depending on demand)

17.00 Closing of the session

Registration

The registration in the workshop is free and has to be done by sending an email to josep.montornes@ctqc.org. Anyone that wants to give one oral presentation in the afternoon session should attach a one page abstract describing the work to be presented. The deadline for presentations proposals is November 21st 2014. There will be an answer about the presentation within one week, deadline Nov 28th.

Venue

The workshop will be held December 11 and 12, 2014 at the CTQC conference room at c/Marcel·lí Domingo, s/n Tarragona, Catalonia, Spain. The international members that need a hotel room reservation should notice that in the registration email.

I hope to meet you at our workshop in Tarragona.

Dr. Ricard Garcia-Valls

