

Program

Water Treatment and Re-Use III and the Water-Energy Nexus

January 8-12, 2012

Cancun, Mexico

Conference Chair:

John Pellegrino

University of Colorado

Conference Co-Chairs:

Glenn Lipscomb

University of Toledo

Ranil Wickramasinghe

University of Arkansas



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Sunday, January 8, 2012

16:00 – 18:00 Conference Check-in

18:00 - 19:00 Opening Reception

19:00 - 19:15 Welcome and Conference Overview
John Pellegrino, Conference Chair

19:15 – 20:00 Opening Talk

The Disappearing Cryosphere - The effects of climate change on future snow conditions in ski areas, ecological effects, and changes in water resources from the Rockies to the Himalayas

Mark Williams, INSTAAR, USA

20:00 – 21:30 Dinner

Monday, January 9, 2012

- 07:30 – 08:30 Breakfast Buffet
- 08:45 – 09:00 Welcome
- 09:00 – 10:00 Keynote Lecture
Session Chair: Glenn Lipscomb
- Motivating wiser use of untreated wastewater for irrigation in developing countries**
Dennis Wichelns, International Water Management Institute, Sri Lanka
- 10:00 – 10:30 Coffee Break
- Session I: Industrial & Municipal Re-use I**
Chair: Joao Crespo
- 10:30 – 11:00 **Membrane Bioreactors: Transport, monitoring and modeling**
Joao G. Crespo, Universidade Nova de Lisboa, Portugal
- 11:00 – 11:30 **Greywater reuse in Saudi Arabia: Current situation and future potential**
A.O. Al-Jasser, King Saud University, Saudi Arabia
- 11:30 – 12:00 **Revisiting blocking laws for constant flux membrane filtration and their application in fouling analysis of a membrane system treating natural organic matter**
Gema Sakti Raspati, NTNU, Norway
- Session II: Water & Climate Resources**
Chair: Ranil Wickramasinghe
- 12:00 – 12:45 ***Water supply and pollution challenges***
James A. Goodrich, US Environmental Protection Agency, USA
- 12:45 – 13:30 ***Energy and sustainability***
Heriberto Cabezas, US Environmental Protection Agency, USA
- 13:30 – 16:30 Lunch & Free Time
- Session III: Industrial & Municipal Re-use II**
Chair: Pierre Cote
- 16:30 – 17:00 **Flowsheet options for resources recovery from wastewater**
Pierre Cote, COTE Membrane Separation Ltd, Canada
- 17:00 – 17:30 **Ultrafiltration based process for winery effluents treatment**
Maria Norberta de Pinho, Universidade Tecnica de Lisboa, Portugal
- 17:30 – 18:00 **Nanofiltration for water recovery in the leather industry**
Andréa Moura Bernardes, Universidade Federal do Rio Grande do Sul, Brazil
- 18:30 – 19:30 Workshop Breakout
- 19:30 - Dinner & Discussions

Tuesday, January 10, 2012

07:30 – 08:45 Breakfast Buffet

Session IV: Bioreactors

Chair: Tor Ove Leiknes

09:00– 09:45 **Development of hybrid vertical anaerobic sludge-aerobic biofilm bioreactor (HyVAB) for wastewater treatment**
Igor Ivanovic, NTNU, Norway

09:45 – 10:30 **Reduction of colloidal and fine particle fractions In recirculating aquaculture systems by an integrated membrane bioreactor**
Astrid Buran Holan, Center of Fisheries and Aquaculture, Norway

10:30 – 11:00 Coffee Break

Session V: Water and Energy

Chair: Jeff McCutcheon

11:00 – 11:30 **Harnessing osmosis for water and energy**
Jeff McCutcheon, University of Connecticut, USA

11:30 – 12:00 **Membrane distillation studies for water desalination**
Kam Sirkar, New Jersey Institute of Technology, USA

12:00 – 12:30 **Water reuse and processing challenges in growth of algal biomass**
Melissa Rickman, University of Colorado, USA

12:30 – 16:30 Lunch and Free Time

16:30 – 18:30 **Poster Session**

18:30 – 19:30 Workshop Breakout

19:30 - Dinner & Discussions

Wednesday, January 11, 2012

07:30 – 08:30 Breakfast Buffet

Session VI: Process Integration and New Ideas

Chair: Yoram Cohen

08:30 – 09:00 **Strategies for RO process integration and cost reduction**
Yoram Cohen, UCLA, USA

09:00 – 09:30 **Static mixing spaces for spiral wound modules**
Glenn Lipscomb, University of Toledo, USA

09:30 – 10:00 **Materials challenges for next-generation water treatment**
Lauren Greenlee, NIST, USA

10:00 – 10:30 **Development of polymer membranes containing a specific ionic liquid for VOCs removal in water**
Tadashi Uragami, Kansai University, Japan

10:30 – 11:00 Coffee break

11:00 – 12:30 Workshop breakout

12:30 – 15:30 Lunch and free time

Session VII: New Materials and Strategic Thinking

Chair: Uwe Beuscher

15:30 – 16:00 **Advances in nanocomposite membranes for liquid separations**
Mary Laura Lind, Arizona State University, USA

16:00 – 16:30 **Immobilization of electrospun TiO₂ nanofibers on substrate and their Photocatalytic activity**
Sang-Hyup Lee, Korea Institute of Science and Technology, Korea

16:30 – 17:00 **Responsive membranes for water treatment**
Ranil Wickramasinghe, University of Arkansas, USA

17:00 – 19:30 Free time

19:30 – 21:00 Conference Banquet

Thursday, January 12, 2012

07:30 – 09:00	Breakfast
09:00 – 12:30	Final Workshop Breakout
12:30 –	Lunch and Departure

Poster Presentations

(some additional posters will be displayed based on the oral presentations already listed)

- 1. Application of membrane techniques to humic matter and pesticides removal from water**
Wladyslaw Kaminski, Technical University of Lodz, Poland
- 2. Water purification from heavy metal ions in a packed column**
Elwira Tomczak, Technical University of Lodz, Poland
- 3. Evaluation of electrodialysis for the treatment of nickel electroplating effluent**
Andréa Moura Bernardes, UFRGS, Brazil
- 4. Treatment of industrial wastewaters containing anionic surfactants by nanofiltration**
Andréa Moura Bernardes, UFRGS, Brazil
- 5. Amphiphilic star-shaped block copolymer for adsorption and photocatalysis of organic contaminants**
Sang-Hyup Lee, Korea Institute of Science and Technology, Korea
- 6. Activated carbon nanofibers: a novel anode material for microbial fuel cells**
Seetha S Manickam, University of Connecticut, USA
- 7. The application of nanotechnology in the treatment of chemically contaminated wastewater**
Anderson Liew, The University of Melbourne, Australia