

Dr. Mark Wilf

Dr. Mark Wilf has defining future directions for membrane technology and application development. This includes reverse osmosis, nanofiltration, ultrafiltration, microfiltration technologies applied for seawater and brackish water desalination, potable water treatment, and industrial and municipal wastewater reclamation and as a consultant with the O₂ TAG.

Recognized as a global expert for membrane

applications, Dr. Wilf provides expertise to the engineering and scientific community worldwide and participates in professional forums defining future directions for membrane technology and application development.

Dr Wilf has been involved in process development, system design, project execution, plant operation and maintenance of large, commercial desalination plants in US, Europe and Middle East since 1977. Dr Wilf has also been involved in the development of new desalination process and optimization membrane technologies. Some of his inventions have resulted in patent applications and are being used in commercial desalination systems.

Dr. Wilf is a regular contributor to professional journals, wrote chapters on membrane technology processes and applications to a number of books.

He edited and wrote with other coauthors The Guidebook to Membrane Desalination Technology that has been published in 2006. The second book on membrane technology he edited and contributed to: The Guidebook to Membrane Technology for Wastewater Reclamation has been published in 2010.

Dr. Wilf regularly presents and teaches desalination and membrane technology subjects to engineers and water professionals. His teaching activity includes teaching course on membrane technology and desalination for the European Desalination Society at the Genoa University, Italy and for the International Desalination Society at various locations.

PATENT AND PAPERS

U.S. Patent application 2005/0194317 A1
Filtration device with embedded radio frequency identification (RFID) tags, applied September 2005.

Inventors: Norio Ikeyama and Mark Wilf. Assignee: Nitto Denko.

· U.S. provisional patent application, Device for measuring permeate flow and permeate conductivity of individual reverse osmosis modules. Applied December 2005. Inventors: Mark Wilf, Rich Franks, Craig Bartels, Norio Ikeyama. Assignee: Nitto Denko.

· PCT Application, PCT/US03/19689, Methods for Reducing Boron Concentration in High Salinity Liquids, Inventors: Mark Wilf, Craig Bartels, Masahiko Hirose. Assignee: Nitto Denko.

· US Patent # 7,442,309, Methods for Reducing Boron Concentration in High Salinity Liquids, Inventors: Mark Wilf, Craig Bartels, Masahiko Hirose. Assignee: Nitto Denko.

· EP 1 392 410 B1, Water treatment

apparatus, issued September 07, 2005. Inventors: Masahiko Hirose, Atsushi Hiro and Mark Wilf. Assignee: Nitto Denko.

· U.S. Patent 6,805,796 Water treatment apparatus, issued September 07, 2005. October 19, 2004. Inventors: Masahiko Hirose, Atsushi Hiro and Mark Wilf. Assignee: Nitto Denko.

· U.S. Patent 6,821,430 Method of treating reverse osmosis membrane element, and reverse osmosis membrane module, issued November 23, 2004. Inventors: Andou Masaaki, Watanabe Terutaka, Hirose Masahiko, Hachisuka Hisao, Wilf Mark, Bartels Craig, Andes Keith, Assignee: Nitto Denko.

· US. Patent 5,905,197 Membrane Sampling Device, issued May 18, 1999. Inventor: Mark Wilf, Assignee: Hydranautics

· "The Guidebook to Membrane Technology for Wastewater Reclamation. Wastewater Treatment, Pollutants, Membrane Filtration, Membrane Bioreactors, Reverse Osmosis, Fouling, UV Oxidation, Process Control, Implementation, Economics, Commercial Plants Design" by M. Wilf with chapters by C. Bartels, D. Bloxom, J. Christopher, A. Festger, K. Khoo, V. Frenkel, J. Hudkins, J. Muller, G. Pearce R. Reardon and A. Royce, Balaban Desalination Publications (January 2010)

· The Guidebook to Membrane Desalination Technology. Reverse Osmosis, Nanofiltration and Hybrid Systems. Process, Design and Applications" by M. Wilf with chapters by C. Bartels, L. Awerbuch, M. Mickley, G. Pearce and N. Voutchkov, Balaban Desalination Publications (2006)

· M. Wilf, "Reverse Osmosis", chapter in Encyclopedia of Water Science, Marcel Dekker Inc. New York 2003, pp: 803 – 808.

· M. Wilf "Reverse Osmosis for Water Reclamation", Water Reclamation and Reuse, Water Quality Management Library – Volume 10, Technomic Publishing Inc., Lancaster Pennsylvania 1998, pp: 263 – 345

· Bartels, M. Wilf, W. Casey and J. Campbell, "New generation of low fouling nanofiltration membranes", C. Desalination (2008) 158 – 167

· M. Gonzales, J. Curbelo, A. Abandes, C. Bartels, S. Talo, M. Wilf and J. Suarez, "Evolution of Configuration and Operation Regime at the Las Palmas III Seawater Desalination Plant" Proceedings of IDA Desalination Conference, Las Palmas, October 2007.

· C. Bartels, S. Rybar, M. Vondar, M. Wilf, M. Estaban and M. Jefferies, "Rehabilitation of Performance of RO Seawater Plant Through Improvement of Pretreatment" Proceedings of IDA Desalination Conference, Las Palmas, October 2007.

· "H. Hyung, P. Mane, J. Brown, M. Wilf, J. Park, S. Kim and J. Kim, "Boron Rejection by SWRO Membranes: From Transport Mechanism to Process Cost Analysis, Proceedings of IDA Desalination Conference, Las Palmas, October 2007.

· "Improving Total Cost of Desalination by Membrane Pre-Treatment" C. Bartels, G. Pearce and M. Wilf, Proceedings of IDA Desalination Conference, Las Palmas, October 2007.

· C. Bartels and M. Wilf, "Use of Dendrimers to Enhance Selective Separation of Nanofiltration and Reverse Osmosis Membrane" Final Report of Contract no. 05FC811176, US Bureau of Reclamation (April 2007)

· N. Lior, A. El-Nashar, C. Sommariva, M. Wilf, "Automation and operation optimization to reduce water cost" Middle East Research Desalination

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· C. Bartels, R. Franks, S. Rybar, M. Schierach, M. Wilf, "The effect of feed ionic strength on salt passage through reverse osmosis membranes", Desalination 184(2005)185-195.

· C. Bartels, M. Hirose, H. Seah and M. Wilf, Optimization of permeate quality in RO seawater systems, Proceedings of IDA Water Desalination Conference, Singapore (2005)

· B. Liberman and M. Wilf, Evolution of configuration of RO seawater desalination systems, Proceedings of IDA Water Desalination Conference, Singapore (2005)

· C. Bartels, M. Wilf, K. Andes and J. long, "Design considerations for wastewater treatment by reverse osmosis", Water Science and Technology, Vol 51, pp 473, 2005

· N. Lior, A. El-Nashar, C. Summariava and M. Wilf, An update on the state of information, measurement, control and automation in

water desalination, Proceedings of IDA Water Desalination Conference, Singapore (2005)

· M. Wilf and C. Bartels, Optimization of seawater RO system design, Desalination 173 (2005) 1 – 12.

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· K. Andes, C.R. Bartels, J. long, M. Wilf, "Design considerations for wastewater treatment by reverse osmosis", Intern. Desalination Assoc., World Congress on Desalination and Water Reuse, September 28-October 3, 2003, Bahamas, Paper BAH03-060