
University of Pennsylvania
Institute for Environmental Studies

presents

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Water Desalination: Status and Role in Water Resources Augmentation and Remediation

"...many of the wars in this century were about oil, but wars of the next century will be over water"
World Bank's vice president for Environmentally Sustained Development, 1995.

Rising population, standards of living and water pollution are diminishing the amounts of naturally available fresh water of good quality while the demand is increasing relentlessly. Consumption is increasing at 4-8%/yr, 2.5-times the population growth. Desalination as a way to produce new fresh water from seawater and other saline water sources, and to assist in the remediation of water unfit for use. About 11,000 plants are operating worldwide and producing about 52 million m³ fresh water per day. While this is somewhat less than 1% of the world water consumption, it is of critical importance in water-short regions, even in the U.S. The most common water desalination processes, as well as methods in the exploratory stage, are described, including their energy consumption, and produced water cost. Water desalination has come under criticism lately because of its negative impacts on the environment. Possible remedies and prospects for the future, and sustainability of water desalination are discussed.

Some related publications by the author

N. Lior and R. Bakish, "Water, Supply and Desalination", Chapter in the Kirk-Othmer Encyclopedia of Chemical Technology, 4th edition, Vol. 25, John Wiley and Sons, Inc., 1998, pp. 438-487.

N. Lior, "Water Desalination", chapter 20.6 in The CRC Handbook of Mechanical Engineering, Editor: F. Kreith, pp. 20-59 - 20-76, CRC Press, Boca Raton, FL, 1998, and in The CRC Handbook of Mechanical Engineering, Second Edition, 2004.

Date: January 28, 2009

Time: NOON - 1:30 pm

Place: Carolyn Hoff Lynch Auditorium

On the Penn campus: Chemistry Building

34 & Spruce Sts. (enter on 34 St)

NO REGISTRATION REQUIRED

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