

National Water Research Institute

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Early Registration Deadline June 24 for “IWA Specialty Conference on Natural Organic Matter”

The early registration deadline for the *Fourth International Water Association (IWA) Specialty Conference on “Natural Organic Matter: From Source to Tap and Beyond”* is **June 24, 2011**. After the June deadline, registration fees will increase.

Current early registration fees include:

650 USD	IWA Members
750 USD	Non IWA Members
350 USD	Students

Registration fees include conference materials, three continental breakfasts, three lunches, the sponsor’s reception, and one conference dinner. You may register at www.regonline.com/NOM2011.

About the Conference

The *IWA Specialty Conference on NOM* is the fourth in a series of international conferences devoted to better understanding the dynamics and impacts of natural organic matter (NOM) in drinking water, wastewater, recycled waters, natural waters, and marine systems.

The conference will be held July 27-29, 2011, in Costa Mesa, California. It is being organized by:

- International Water Association
- Urban Water Research Center at the University of California, Irvine
- National Water Research Institute
- Southeast Environmental Research Center, Florida International University
- University of California Office of the President
- Water Science Institute at Cranfield University

Sponsors include:

- Ahlstrom Filtration LLC
- Carollo Engineers
- Consulate General of Canada
- Hazen & Sawyer
- Orange County Water District
- National Science Foundation
- Trojan Technologies
- University of California Center for Hydrologic Modeling
- U.S. Environmental Protection Agency

- Ushio America, Inc.
- Water Research Foundation

The term “NOM” describes organic material (originating from plants and animals) that has undergone biological and chemical alterations, often giving water a “brownish” look. In wastewater, it is referred to as “effluent organic matter” (EfOM). The challenge with organic matter is that it causes the formation of disinfection byproducts during the treatment process. Disinfectants are used to provide safe drinking water; however, when a chemical oxidant is added to water as a disinfectant, it reacts with any NOM that is present to form disinfection byproducts, which may have adverse human health effects. On the wastewater side, EfOM (which is less characterized than NOM) creates similar challenges with membrane treatment and water reuse. In contrast, in natural systems, NOM is usually referred to as “dissolved organic matter” (DOM) and is known to control a variety of environmental and biogeochemical processes. Its characterization is critical for the better understanding of ecosystem function and carbon cycling.

At the conference, scientists and engineers from around the world will examine the importance of organic matter in drinking water, wastewater, recycled water, and carbon cycling in natural waters, including:

- Control strategies for NOM removal in water treatment processes.
- Advances in membrane processes for water and wastewater treatment.
- The formation of disinfection byproducts.
- Water management and sustainability
- Wetland and coastal water carbon cycling.
- Impacts on ecological and biogeochemical processes.
- Potential effects of land use and climate change.

Presentations

The 3-day conference will feature over 200 presentations given by speakers from over 25 countries, including the United States, Canada, China, The Netherlands, Germany, Australia, Saudi Arabia, and many others.

Highlighted speakers include:

- **Gary Amy**, Director of the Water Desalination and Reuse Center, King Abdullah University of Science and Technology (KAUST) in Saudi Arabia
- **Auguste Bruchet**, Expert in Analytical Chemistry at CIRSEE-Suez Environment in France
- **Stuart Krasner**, Principal Environmental Specialist at the Metropolitan Water District of Southern California
- **Madjid Mohseni**, Professor at the University of British Columbia in Canada
- **Felicity Roddick**, Professor at RMIT University in Melbourne, Australia
- **Paul Westerhoff**, Professor at Arizona State University
- And many others.

Of special note are the following conference keynote presenters, who will speak during plenary sessions:

- **Dr. Philip Singer**, Professor Emeritus at the University of North Carolina at Chapel Hill
- **Dr. Susan D. Richardson**, Research Chemist at the U.S. Environmental Protection Agency, National Exposure Research Laboratory
- **Priv. Doz. Dr. Philippe Schmitt-Kopplin**, Head of the Department of BioGeoChemistry and Analytics at Helmholtz Zentrum München, German Research Center for Environmental Health
- **Dr. Norbert Hertkorn**, of the Department of BioGeoChemistry and Analytics at Helmholtz Zentrum München, German Research Center for Environmental Health

Optional Pre-Conference Tour

The conference will also include an optional tour to the Groundwater Replenishment (GWR) System at the Orange County Water District in Fountain Valley, California. The GWR System is one of the most distinguished water reuse projects in the world, having received numerous awards, including the Stockholm International Industry Water Award. It removes NOM from wastewater using microfiltration and reverse osmosis treatment processes.

The optional pre-conference tour will be held on July 26, 2011, at from 1:00 to 5:00 pm. The cost for the tour is not included in the registration fees. The cost is 55 USD.

Register Now

Take advantage of the discounted registration fees by registering before **June 24, 2011**. For more information or to register, please visit the conference website at www.regonline.com/NOM2011.

2011 Clarke Prize to Honor Mark Wiesner of Duke University

Environmental engineer Mark R. Wiesner, Ph.D., P.E., will receive the 2011 NWRI Athalie Richardson Irvine Clarke Prize for excellence in water research on July 14, 2011, at the Eighteenth Annual Clarke Prize Award Ceremony and Lecture.

Wiesner is the James L. Meriam Professor of Civil and Environmental Engineering at Duke University. He was selected as the 2011 recipient because of his groundbreaking efforts and leadership in improving water quality through advancements in membrane and nanotechnology research.

Consisting of a gold medallion and \$50,000 award, the Clarke Prize is given out each year to recognize research accomplishments that solve real-world water problems and to highlight the importance of and need to continue funding this type of research. Joan Irvine Smith, co-founder of NWRI and daughter of Athalie Richardson Irvine Clarke, will present the award to Wiesner at the award ceremony.

Wiesner was among the first American scientists to research the application of low-pressure membranes to water treatment. His efforts to improve the performance of membranes led him to investigate the uses of technology at the molecular level ("nanotechnology"). From this work, he began to question if nanomaterials might have detrimental effects on human health and the environment.

Since the late 1990s, Wiesner has taken the lead in studying the fabrication, transport, fate, toxicity, and risk of nanoparticles in the environment. One of his major accomplishments was the creation of the Center for the Environmental Implications of NanoTechnology (CEINT) at Duke University, where he serves as Director. CEINT is a 10-year, multi-institutional, \$30-million dollar effort focused on understanding nanomaterial behavior from the nano-scale to the ecosystem-scale and to identify possible risks.

More information about NWRI's Clarke Prize can be found at www.nwri-usa.org/ClarkePrize.htm.

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