

PROGRAM: WEDNESDAY, JULY 27

Session 1: 1:00 pm to 3:00 pm

	Track A	Track B	Track C	Track D	Track E
	Emerald Bay I	Emerald Bay II	Emerald Bay III	Balboa Bay I	Balboa Bay II
	A1: Treatment and Removal 1	B1: Molecular Characterization 1	C1: Disinfection Byproducts 1	D1: Monitoring 1	E1: Advanced Oxidation 1
	Moderator: Michael Gonsior, Ph.D.	Moderator: S. Leigh McCallister, Ph.D.	Moderator: Ina Kristiana, Ph.D.	Moderator: Prof. Dongsheng Wang	Moderator: Fernando Rosario-Ortiz, Ph.D.
1:00 – 1:30	<p>Dissolved Organic Matter Increase and Its Impact on Water Treatment</p> <p>DR. AUGUSTE L. BRUCHET <i>CIRSEE-Suez Environment (Le Pecq, France)</i></p>	<p>Molecular Weight Size Distribution, Composition, Bio-Availability, and Photo-Reactivity of DOM in the Everglades Ecosystem, Florida</p> <p>KAELIN CRAWLEY, PH.D. <i>Florida International University (North Miami, Florida, USA)</i></p>	<p>What Does TOC Mean to My Drinking Water Treatment Plant?</p> <p>APRIL M. NABORS <i>Birmingham Water Works Board (Birmingham, Alabama, USA)</i></p>	<p>Online Estimation of Biological Stability in Drinking Water Treatment</p> <p>PETRA ROSS <i>Delft University of Technology (Delft, The Netherlands)</i></p>	<p>Characterization and Monitoring of EfOM through UV/H₂O₂ and Ozonation Processes</p> <p>CARMEN SANS, PH.D. <i>University of Barcelona (Barcelona, Spain)</i></p>
1:30 – 2:00	<p>Characterizing NOM and Removal Trends during Drinking Water Treatment Using Fluorescence Excitation-Emission Matrices and PARAFAC</p> <p>GARY L. AMY, PH.D. <i>King Abdullah University of Science and Technology (Thuwal, Saudi Arabia)</i></p>	<p>Optimization of Measurement of Aquatic Humic and Fulvic Acids by a Batch Method Using Experimental Design</p> <p>DIEGO HINCAPIÉ-UPEGUI <i>University of Antioquia (Medellin, Columbia)</i></p>	<p>Use of Physicochemical Changes in NOM to Evaluate THM Formation during Snowmelt, after Wildfires, and in Pre-Ozonation Water Treatment</p> <p>ALEX D. REVCHUK, PH.D. <i>Water Quality & Treatment Solutions, Inc. (Los Angeles, California, USA)</i></p>	<p>Colored Dissolved Organic Matter as a Tracer of Effluent Plumes</p> <p>NIKOLAY P. NEZLIN, PH.D. <i>Southern California Coastal Water Research Project (Costa Mesa, California, USA)</i></p>	<p>Spectroscopy and Chromatography Study of Ozonation Effects on Effluent Organic Matter and Transformation of Antibiotics</p> <p>CHEN LIU <i>University of Washington (Seattle, Washington, USA)</i></p>
2:00 – 2:30	<p>Application of Molecular Weight Profile with Peak Fitting to Predict DOM Treatability of Low Specific UV Absorbance Surface Waters</p> <p>CHRIS W.K. CHOW, PH.D. <i>Australian Water Quality Centre (Adelaide, Australia)</i></p>	<p>DOM Composition and Photoreactivity in Prairie Lakes of the U.S. Great Plains</p> <p>CHRISTOPHER L. OSBURN, PH.D. <i>North Carolina State University (Raleigh, North Carolina, USA)</i></p>	<p>How NOM Fractionation Can Be Used to Inform Water Treatability</p> <p>PETER JARVIS, PH.D. <i>Cranfield Water Sciences Institute, Cranfield University (Cranfield, United Kingdom)</i></p>	<p>An ATP-Based Method to Determine Bacterial Regrowth Potential in Drinking Water</p> <p>TANUSH WADHAWAN <i>North Dakota State University (Fargo, North Dakota, USA)</i></p>	<p>Effect of Effluent Organic Matter on the Application of Advanced Oxidation for Wastewater Treatment</p> <p>MEI MEI DONG <i>University of Colorado, Boulder (Boulder, Colorado, USA)</i></p>
2:30 – 3:00	<p>Comparative Study of the Removal of NOM from Different Raw Waters by Ion Exchange</p> <p>PROF. BHEKIE B. MAMBA <i>University of Johannesburg (Johannesburg, South Africa)</i></p>	<p>NOM in South African Waters: Characterization and Method Development for Effective NOM Removal from Water</p> <p>THABO NKAMBULE <i>University of Johannesburg (Johannesburg, South Africa)</i></p>	<p>Comparison of Disinfection Byproducts from Using Chlorine and Chlorine Dioxide in Drinking Water Distribution Systems</p> <p>HRVOJE JURETI, PH.D. <i>University of Zagreb, Faculty of Mechanical Engineering and Naval Architecture (Zagreb, Croatia)</i></p>	<p>What, Where, When, and How Much? Combining Watershed NOM Source and Reactivity Studies with Real-Time Monitoring</p> <p>TAMARA KRAUS <i>United States Geological Survey (Sacramento, California, USA)</i></p>	<p>Temperature Dependence of the Kinetics Reaction Between Hydroxyl Radical and Organic Matter</p> <p>GARRETT J. MCKAY <i>California State University, Long Beach (Long Beach, California, USA)</i></p>

3:00 pm to 3:30 pm **Networking Break** **Pacific Ballroom**

Session 2: 3:30 pm to 5:00 pm

	Track A	Track B	Track C	Track D	Track E
	Emerald Bay I	Emerald Bay II	Emerald Bay III	Balboa Bay I	Balboa Bay II
	A2: Treatment and Removal 2	B2: Molecular Characterization 2	C2: Disinfection Byproducts 2	D2: Membranes 1	E2: Advanced Oxidation 2
	Moderator: G. Adam Zacheis, Ph.D.	Moderator: Michael Gonsior, Ph.D.	Moderator: Siva R. Sarathy, Ph.D.	Moderator: Jeffrey J. Mosher	Moderator: Miguel Pelaez
3:30 – 4:00	<p>Characterization of DOM Removal by Full-Scale Biological Activated Carbon (BAC) Filters Having Different Ages</p> <p>JENYUK LOHWACHARIN, PH.D. <i>University of Tokyo (Tokyo, Japan)</i></p>	<p>Molecular Composition and Optical Properties of NOM: Correlating Bulk Spectroscopy and Ultrahigh Resolution Mass Spectrometry</p> <p>WILLIAM T. COOPER, PH.D. <i>Florida State University (Tallahassee, Florida, USA)</i></p>	<p>Kinetic Measurements of DBP Formation in Model Systems and Natural Waters Using Membrane Introduction Mass Spectrometry Techniques</p> <p>CAMERON NEWHOOK <i>Vancouver Island University (Nanaimo, British Columbia, Canada)</i></p>	<p>Preventing Membrane Fouling by Osmosis Stress</p> <p>LEDA KATEBIAN <i>University of California, Irvine (Irvine, California, USA)</i></p>	<p>Impact of NOM and Nitrate on the Feasibility of UV/H₂O₂ Treatment for Organic Micropollutant Control</p> <p>BRAM J. MARTIJN <i>PWN Water Supply Company North Holland (Velsersbroek, The Netherlands)</i></p>
4:00 – 4:30	<p>Effect of Biological Activated Carbon Filters on the Removal of Biodegradable NOM and Molecular Weight</p> <p>KERRY E. BLACK <i>University of British Columbia (Vancouver, British Columbia, Canada)</i></p>	<p>Fluorescence-Based Rapid Identification of Different NOM Fractions for Drinking Water Treatment Applications</p> <p>RAMILA H. PEIRIS, PH.D. <i>University of Waterloo (Waterloo, Ontario, Canada)</i></p>	<p>Analysis and Occurrence of Iodinated-Trihalomethanes in UK Drinking Waters</p> <p>SIMON PARSONS, PH.D. <i>Cranfield Water Science Institute, Cranfield University (Cranfield, United Kingdom)</i></p>	<p>Influence of the Organic Carbon to Nitrogen/Phosphorus Ratio on Seawater Reverse Osmosis Membrane Biofouling</p> <p>SIMON (SIQIAN) HUANG <i>University of California, Irvine (Irvine, California, USA)</i></p>	<p>NOM Fractionation to Compare the Effectiveness of Advanced Oxidation Process</p> <p>GRAHAM A. GAGNON, PH.D., P.E. <i>Dalhousie University (Halifax, Nova Scotia, Canada)</i></p>
4:30 – 5:00	<p>Polyaluminium Chloride and Chitosan Composite Coagulant for NOM Removal</p> <p>MEGA NG <i>University of New South Wales (Sydney, Australia)</i></p>	<p>Characterization of DOM in Humic Rich Tributaries of a Drinking Water Reservoir in Saxony Using Ultra-High-Resolution Mass Spectrometry (FTICR/MS) and Excitation Emission Matrix Fluorescence Spectroscopy (EEMF)</p> <p>PETER HERZSPRUNG, PH.D. <i>Helmholtz Centre for Environmental Research – UFZ (Magdeburg, Germany)</i></p>		<p>TEP, an Ubiquitous Constituent of NOM, Is an Important Factor in Membrane Biofouling</p> <p>TOM BERMAN, PH.D. <i>Kinneret Limnological Laboratory, Israel Oceanographic and Limnological Research (Tabgha, Israel)</i></p>	<p>Use of Organic Characterization Techniques to Monitor Advanced Oxidation Processes in Water Reuse and Wastewater Treatment</p> <p>BENJAMIN D. STANFORD, PH.D. <i>Hazen and Sawyer, P.C. (Raleigh, North Carolina, USA)</i></p>

5:30 pm to 7:30 pm Sponsor's Reception Fountain Terrace

Conference Sponsors include:

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- Orange County Water District
- Trojan Technologies
- U.S. Environmental Protection Agency
- University of California Center for Hydrologic Modeling
- Ushio America, Inc.
- Water Research Foundation

PROGRAM: THURSDAY, JULY 28

7:30 am to 5:00 pm Registration Banquet Level 2

7:30 am to 9:00 am Continental Breakfast Pacific Ballroom

Session 3: 8:00 am to 10:00 am

	Track A	Track B	Track C	Track D	Track E
	Emerald Bay I	Emerald Bay II	Emerald Bay III	Balboa Bay I	Balboa Bay II
	A3: Treatment and Removal 3	B3: Molecular Characterization 3	C3: Disinfection Byproducts 3	D3: Photochemistry	E3: Treatment & Characterization 1
	Moderator: Chris W.K. Chow, Ph.D.	Moderator: Prof. Bhekile B. Mamba	Moderator: Kerry E. Black	Moderator: Fernando Rosario-Ortiz, Ph.D.	Moderator: Barbara A. Cottrell
8:00 – 8:30	<p>Characterization and Modeling DOM Removal by Enhanced Coagulation</p> <p>PROF. DONGSHENG WANG <i>State Key Lab of Environmental Aquatic Chemistry, Chinese Academy of Sciences (Beijing, China)</i></p>	<p>Characterizing the DOM in Leaf-Litter Leachates using AF4-UV/Vis-EEM: Is “Source Variability” Evident at the Source?</p> <p>CHAD W. CUSS <i>Trent University (Peterborough, Ontario, Canada)</i></p>	<p>Examining Potential “Red Water” Problems Associated with Replacing Chlorine with Chloramines for Disinfection Byproducts (DBP) Control</p> <p>JASON A. HEBERLING <i>Birmingham Water Works Board (Birmingham, Alabama, USA)</i></p>	<p>Determination of UV Phototransformation of DOM in Treated Drinking Water by 3D Fluorescence</p> <p>AARON D. DOTSON <i>University of Alaska Anchorage (Anchorage, Alaska, USA)</i></p>	<p>Optimization of NOM Reduction for Drinking Water Production</p> <p>JAAKKO O. PELLINEN, P.G. <i>University of Oulu (Oulu, Finland)</i></p>
8:30 – 9:00	<p>Inhibition Effect of Proteineous Substances from Cyanobacterium <i>Microcystis Aeruginosa</i> on Coagulation/Flocculation of Kaolin Suspension</p> <p>JANA ŠAFÁŘIKOVÁ <i>Institute of Hydrodynamics, Academy of Sciences of the Czech Republic (Prague, Czech Republic)</i></p>	<p>Size Exclusion Chromatography with Online ICP-MS: Metal-OM Complexations Explored</p> <p>ERICA R. MCKENZIE <i>University of California, Davis (Davis, California, USA)</i></p>	<p>Formal Modeling of Yields and Speciation of Dihaloacetonitriles Formed in Chlorinated Drinking Water at Varying Bromide Concentrations</p> <p>PAOLO ROCCARO, Ph.D. <i>University of Catania (Catania, Italy)</i></p>	<p>Assessment of Photo- and Bio-Reactivity of Dissolved Organic Matter from the Florida Everglades Using Excitation-Emission Metrics Coupled with Parallel Factors Analysis</p> <p>RUDOLF JAFFÉ, Ph.D. <i>Florida International University (North Miami, Florida, USA)</i></p>	<p>Removal of NOM Fractions by Two Potable Water Treatment Processes: Micro/Nano Membrane Filtration and Lime Soda Softening</p> <p>CHARLES D. GOSS <i>University of Manitoba (Winnipeg, Manitoba, Canada)</i></p>
9:00 – 9:30	<p>The Response of Typical South African Raw Waters to Enhanced Coagulation</p> <p>SISEKELO P. DLAMINI <i>University of Johannesburg (Johannesburg, South Africa)</i></p>	<p>Characterization of Organic Matter in Alum Treated Drinking Water Using Reverse Phase-High Performance Liquid Chromatography and Ion-Exchange Resins</p> <p>PROF. DONGSHENG WANG <i>State Key Lab of Environmental Aquatic Chemistry, Chinese Academy of Sciences (Beijing, China)</i></p>	<p>Investigation of Pre-Disinfection with Chlorine Dioxide of Aqueous Solutions Containing Fulvic and Humic Acids and Bromide Ions</p> <p>NAVA NARKIS, Sc.D. <i>The Technion-Israel Institute of Technology (Haifa, Israel)</i></p>	<p>Photochemical Production of Hydrogen Peroxide in Marine Bathing Waters in Southern California</p> <p>CATHERINE CLARK, Ph.D. <i>Chapman University (Orange, California, USA)</i></p>	<p>Effect of NOM Characteristics on the Removal of Pharmaceutically Active and Endocrine Disrupting Compounds by Coagulation</p> <p>SABRINA A. DIEMERT <i>University of Toronto (Toronto, Ontario, Canada)</i></p>
9:30 – 10:00	<p>Evaluation of Enhanced Coagulation Pretreatment to Improve Ozone Oxidation Efficiency in Wastewater</p> <p>ERIC C. WERT, P.E. <i>Southern Nevada Water Authority (Las Vegas, Nevada, USA)</i></p>	<p>Comparison of Two Polarity Measurements of Hydrophobic Organic Matter for the Evaluation of Water Treatment Processes: XAD Resin and PRAM</p> <p>MARC PHILIBERT <i>University of California, Los Angeles (Los Angeles, California, USA)</i></p>	<p>Evaluating the Contribution of NOM Fractions to the Formation of Disinfection Byproducts in Conventional Filtration Plants</p> <p>GRAHAM A. GAGNON, Ph.D., P.E. <i>Dalhousie University (Halifax, Nova Scotia, Canada)</i></p>	<p>Photodegradation of Naproxen and Ibuprofen and the Formation of Ecotoxic Photoproducts in Natural Water Samples</p> <p>WENDY C. CORY, Ph.D. <i>College of Charleston (Charleston, South Carolina, USA)</i></p>	<p>NOM Present in Biosorbent Peat for Decontamination of Water Containing Metallic Species</p> <p>ANA PAULA DOS SANTOS BATISTA <i>Universidade Federal de Sergipe (Aracaju, Brazil)</i></p>

10:00 am to 10:30 am Networking Break Pacific Ballroom

Session 4: 10:30 am to 12 noon

	Track A	Track B	Track C	Track D	Track E
	Emerald Bay I	Emerald Bay II	Emerald Bay III	Balboa Bay I	Balboa Bay II
	A4: Treatment and Removal 4	B4: Wastewater Topics 1	C4: Disinfection Byproducts 4	D4: Monitoring 2	E4: Treatment & Characterization 2
	<i>Moderator:</i> Eakalak Khan, Ph.D., P.E.	<i>Moderator:</i> Jeffrey J. Mosher	<i>Moderator:</i> Ina Kristiana, Ph.D.	<i>Moderator:</i> Rudolf Jaffé, Ph.D.	<i>Moderator:</i> Jeffrey A. Nason, Ph.D.
10:30 – 11:00	<p>Direct Observation and Modeling of Solid-Phase Macromolecules Concentration Profile in Powdered Activated Carbon Particle</p> <p>NAOYA ANDO, PH.D. <i>METAWATER Co., Ltd (Ichihara-City, Japan)</i></p>	<p>Characterization and Treatability of Wastewater Organics</p> <p>PAUL WESTERHOFF, PH.D. <i>Arizona State University (Tempe, Arizona, USA)</i></p>	<p>Characterization of Dissolved Organic Matter in Colorado's Watersheds: The Role of Nutrients and Algae on DBP Formation</p> <p>AMANDA K. HOHNER <i>University of Colorado, Boulder (Boulder, Colorado, USA)</i></p>	<p>High-Resolution Dynamics of Dissolved and Particulate Organic Carbon in a Mountain Stream Monitored by an <i>In Situ</i> Optical Sensor</p> <p>JI-HYUNG PARK, PH.D. <i>Kangwon National University (Chuncheon, South Korea)</i></p>	<p>The Effect of Changing NOM Composition, Measured by LC-OCD, on NOM Treatability in Downstream Processes</p> <p>MARCO DIGNUM, PH.D. <i>Waternet (Amsterdam, The Netherlands)</i></p>
11:00 – 11:30	<p>Evaluating and Designing GAC Treatment Systems for Removing DBP Precursors from Drinking Water</p> <p>KIRK O. NOWACK, PH.D. <i>Malcolm Pirnie, The Water Division of ARCADIS (Wilmington, Delaware, USA)</i></p>	<p>The Reactivity of EfOM and Effluent-Impacted Waters with Chloramines in Forming NDMA</p> <p>STUART W. KRASNER <i>Metropolitan Water District of Southern California (Los Angeles, California, USA)</i></p>	<p>Nanosilver in the Glass of Water – A Comprehensive Identification of Disinfection Byproducts and Assessment of Mutagenicity of Disinfected Drinking Water in the Presence of Nanosilver</p> <p>SLAVEN DOBROVI, PH.D. <i>University of Zagreb, Faculty of Mechanical Engineering and Naval Architecture (Zagreb, Croatia)</i></p>	<p>NOM and Effluent Organic Matter (EfOM) Characterization in the Urban Water Cycle by Excitation-Emission Matrix Fluorescence Spectroscopy</p> <p>MARTHA J.M. WELLS, PH.D. <i>Midway College School of Pharmacy (Paintsville, Kentucky, USA)</i></p>	<p>NOM in Finnish Surface Waters: Influence on Waterworks Purification Process and on Drinking Water</p> <p>JAAKKO O. PELLINEN, P.G. <i>University of Oulu (Oulu, Finland)</i></p>
11:30 – 12:00	<p>Comparison of NOM Adsorption Capacities of Super-Powdered Activated Carbon and Powdered Activated Carbon</p> <p>YOSHIHIKO MATSUI, PH.D. <i>Hokkaido University (Sapporo, Japan)</i></p>	<p>Understanding Dissolved Organic Matter in Wastewater Using an EfOM-Focused PARAFAC Model for Assessment of EfOM Impacts on a Watershed</p> <p>GARY L. AMY, PH.D. <i>King Abdullah University of Science and Technology (Thuwal, Saudi Arabia)</i></p>	<p>Characterization of DOM and Chlorinated Disinfection Byproducts Formation Potential</p> <p>QIMING XIAN, PH.D. <i>Nanjing University (Nanjing, China)</i></p>	<p>Tracing Refractory Dissolved Organic Matter Source in a Lake Using Multiple Analytical Tools</p> <p>HANG V.M. NGUYEN <i>Sejong University (Seoul, South Korea)</i></p>	<p>The Interaction and Correlation Between DBPs and Dissolved Organic Matter in Raw and Treated Drinking Water</p> <p>MENG-HORNG (CHRIS) HSU <i>University of California, Los Angeles (Los Angeles, California, USA)</i></p>

12:00 noon to 1:30 pm Lunch Pacific Ballroom

Lunch Sponsored by:



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PROGRAM: THURSDAY, JULY 28

Session 5: 1:30 pm to 3:00 pm

	Track A	Track B	Track C	Track D	Track E
	Emerald Bay I	Emerald Bay II	Emerald Bay III	Balboa Bay I	Balboa Bay II
	A5: Treatment and Removal 5	B5: Wastewater Topics 2	C5: Environmental Fate and Transport 1	D5: Membranes 2	E5: Catchment 1
	<i>Moderator:</i> Peter Jarvis, Ph.D.	<i>Moderator:</i> Paul Westerhoff, Ph.D.	<i>Moderator:</i> Peter Hernes, Ph.D.	<i>Moderator:</i> Graham J.G. Juby, Ph.D.	<i>Moderator:</i> Dr. Auguste L. Bruchet
1:30 – 2:00	<p>Application of Humate Sustainable Alternative for Remediation of Wastewater and Groundwater</p> <p>EWA LIPCZYNSKA-KOCHANY, PH.D., Sc.D. <i>Environmental Consultant (Mississauga, Ontario, Canada)</i></p>	<p>Chemistry of Effluent Organic Matter: A Non-Target Approach of Analyzing the Complex DOC in Secondary Treated Effluent</p> <p>MICHAEL GONSIOR, PH.D. <i>Linköping University (Linköping, Sweden)</i></p>	<p>Environmental Dynamics of Dissolved Organic Matter Associated Black Carbon (DOM-BC) in Freshwater Ecosystems</p> <p>YAN DING <i>Florida International University (North Miami, Florida, USA)</i></p>	<p>Analyzing the Employed Technologies for Removing Chromophoric Dissolved Organic Matter from the Groundwater in Orange County</p> <p>REZA SOBHANI <i>University of California, Irvine (Irvine, California, USA)</i></p>	
2:00 – 2:30	<p>Assessment of NOM Treatability Using Combined Characterization Techniques</p> <p>CHRIS W.K. CHOW, PH.D. <i>Australian Water Quality Centre (Adelaide, Australia)</i></p>	<p>Ozonation of a Non-Nitrified Secondary Effluent to Reduce MF Fouling by EfOM</p> <p>FREDRICK W. GERRINGER, D.Env., P.E. <i>Trussell Technologies, Inc. (Pasadena, California, USA)</i></p>	<p>Isolation of Black Carbon in Marine Bulk Dissolved Organic Carbon Using a Revised Solid Phase ExTracktion Method</p> <p>ALYSHA I. COPPOLA <i>University of California, Irvine (Irvine, California, USA)</i></p>	<p>Removal of NOM at the Deep Aquifer Treatment System (DATS)</p> <p>CARL W. SPANGENBERG, P.E. <i>Irvine Ranch Water District (Irvine, California, USA)</i></p>	<p>Natural Purification Mechanism of Forest and River: Poisonous Substance Removal</p> <p>MATSUNORI NARA, Sc.D. <i>Tokyo University of Science (Chino, Japan)</i></p>
2:30-3:00	<p>Using One Mobile Pilot Plant for TOC and DBP Optimization at Multiple Filter Plants</p> <p>JEFF COCHRAN, PH.D., P.E. <i>Birmingham Water Works Board (Birmingham, Alabama, USA)</i></p>	<p>Effluent Organic Matter, <i>Microcystis Aeruginosa</i> and Microfiltration Membranes</p> <p>FELICITY A. RODDICK, Sc.D. <i>RMIT University (Melbourne, Australia)</i></p>	<p>Organic Matter Sources and Transformations along a Headwater Stream – River Reservoir Continuum</p> <p>S. LEIGH MCCALLISTER, PH.D. <i>Virginia Commonwealth University (Richmond, Virginia, USA)</i></p>	<p>Removal of Highly Colored NOM from Deep Aquifer Groundwater Using Low Rejection PES NF Membranes at the Colored Water Treatment Facility</p> <p>G. ADAM ZACHEIS, PH.D. <i>Carollo Engineers (Fountain Valley, California, USA)</i></p>	<p>DOM Reactivity in First-Order Streams of Differing Land Use in the York River Estuary, VA</p> <p>YUEHAN LU, PH.D. <i>University of Alabama (Tuscaloosa, Alabama, USA)</i></p>

3:00 pm to 3:30 pm Networking Break Pacific Ballroom

Session 6: 3:30 pm to 5:00 pm

	Track A	Track B	Track C	Track D	Track E
	Emerald Bay I	Emerald Bay II	Emerald Bay III	Balboa Bay I	Balboa Bay II
	A6: Treatment and Removal 6	B6: Molecular Characterization 4	C6: Catchment 2	D6: Membranes 3	E6: University of California Meeting
	Moderator: Kerry E. Black	Moderator: Chad W. Cuss	Moderator: Fernando Rosario-Ortiz, Ph.D.	Moderator: Gary L. Amy, Ph.D.	Moderator: William J. Cooper, Ph.D.
3:30 – 4:00	Reduction of Broad Spectrum NOM Contamination to Minimize Fouling of Membrane using Electroadsorptive Depth Filter Media RODNEY S. KOMLENIC <i>Ahlstrom Filtration LLC (Mt. Holly Springs, Pennsylvania, USA)</i>	Stabilization Processes of Olive Pomace in Soil: A Laboratory Experiment by Isoelectric Focusing and ¹³ C NMR FRANCESCO ALIANIELLO <i>Agricultural Research Council – Research Centre for Soil/Plant System (CRA-RPS) (Rome, Italy)</i>	Ultrahigh Resolution Mass Spectrometry of Dissolved Organic Nitrogen in Water Treatment Areas WILLIAM T. COOPER, PH.D. <i>Florida State University (Tallahassee, Florida, USA)</i>	Refractory Organic Matter (ROM) Removal in Water Treatment: Power and Limitations of Hybrid Processes PROF. DR. FRITZ H. FRIMMEL <i>Karlsruhe Institute of Technology (Karlsruhe, Germany)</i>	Meeting of University of California Faculty to discuss a UC Center for Water, Wastewater, and Water Reuse
4:00 – 4:30	Characterization of Organics in Marcellus Flowback Waters BRIAN A. DEMPSEY, PH.D. <i>Pennsylvania State University (University Park, Pennsylvania, USA)</i>	A Method to Determine Biodegradable Dissolved Organic Nitrogen in Water EAKALAK KHAN, PH.D., P.E. <i>North Dakota State University (Fargo, North Dakota, USA)</i>	Effects of Watershed Disturbance on DOC Characteristics in Headwater Streams RUDOLF JAFFÉ, PH.D. <i>Florida International University (North Miami, Florida, USA)</i>	IEX to Control Natural Organic Matter Fouling in Nanofiltration EMILE R. CORNELISSEN, PH.D. <i>KWR Watercycle Research Institute (Nieuwegein, The Netherlands)</i>	
4:30-5:00	NOM Characterization and Removal by Water Treatment Processes for Drinking Water and Ultra Pure Process Water ALEXANDER F. KEUCKEN, P.E. <i>Vatten & Miljö i Väst AB (Falkenberg, Sweden)</i>		Biodegradation of Catchment Source Organic Matter in Riverine Environments MERISSA MARIUS <i>University of Southampton (Southampton, United Kingdom)</i>	NOM Removal and Fouling By a Novel, Combined Adsorption/Microfiltration Process ZHENXIAO (NATHAN) CAI <i>University of Washington (Seattle, Washington, USA)</i>	

5:30 pm to 6:30 pm Reception **Catalina Ballroom Foyer**

6:30 pm to 9:00 pm Conference Dinner **Catalina Ballroom**

After Dinner, a Feature Presentation of the Documentary

RUNNING DRY: A CALL TO ACTION

Welcome by **Jim Thebaut**, Producer (*Redondo Beach, California, USA*)

This dinner will feature the presentation of a documentary called, *Running Dry: A Call to Action*. It was inspired by former U.S. Senator Paul Simon's book *Tapped Out*, and highlights the coming world crisis in water and what we can do about it. The documentary was written, produced, and directed by **Jim Thebaut** and narrated by actress **Jane Seymour**.



PROGRAM: FRIDAY, JULY 29

7:30 am to 5:00 pm Registration Banquet Level 2

7:30 am to 9:00 am Continental Breakfast Pacific Ballroom

Session 7: 8:00 am to 10:00 am

	Track A	Track B	Track C	Track D	Track E
	Emerald Bay I	Emerald Bay II	Emerald Bay III	Balboa Bay I	Balboa Bay II
	A7: Treatment and Removal 7	B7: Coastal and Seawater	C7: Disinfection Byproducts 5	D7: Environmental Factors	E7: Advanced Oxidation 3
	Moderator: Paul Westerhoff, Ph.D.	Moderator: Christopher L. Osburn, Ph.D.	Moderator: Stuart W. Krasner	Moderator: Thabo Nkambule	Moderator: Aaron D. Dotson
8:00 – 8:30	<p>Ion Exchange for NOM Removal from a Sulfate Rich Surface Water Incorporating Full Reuse of the Brine</p> <p>LIESBETH B. VERDICKT <i>VMW (Flemish Drinking Water Company) (Brussels, Belgium)</i></p>	<p>Characterization of NOM from Mediterranean Coastal Seawater</p> <p>F. XAVIER SIMON <i>University of Barcelona (Barcelona, Spain)</i></p>	<p>Nitrogenous Disinfection Byproducts Formation Potential from Molecular Weight Fractions of NOM</p> <p>INA KRISTIANA, Ph.D. <i>Curtin Water Quality Research Centre (Perth, Australia)</i></p>		<p>Use of Organic Photosensitizers to Elucidate Mechanisms of Solar Driven Processes on Pesticides</p> <p>DR. ANTONIO ARQUES <i>Universidad Politécnica de Valencia (Alcoy, Spain)</i></p>
8:30 – 9:00	<p>Removal of NOM from Concentrates Produced by an Ultrafiltration System Treating Drinking Water</p> <p>MAURÍCIO COSTA CABRAL DA SILVA <i>International Reference Center of Water Reuse (São Paulo, Brazil)</i></p>	<p>Quantifying Abiotic Organobromine Formation in Seawater During Exposure to Solar Radiation</p> <p>MICHAEL C. DODD, Sc.D. <i>University of Washington (Seattle, Washington, USA)</i></p>	<p>Agricultural Impacts on Stream DOC in a Sacramento Valley Watershed</p> <p>PETER HERNES, Ph.D. <i>University of California, Davis (Davis, California, USA)</i></p>	<p>The Role of Humic Substances in Controlling the Colloidal Stability of Organically Stabilized Gold Nanoparticles in Aqueous Systems</p> <p>JEFFREY A. NASON, Ph.D. <i>Oregon State University (Corvallis, Oregon, USA)</i></p>	<p>Influence of NOM Concentration on Parameter Sensitivity of a Mechanistic Ozone Decomposition Model</p> <p>WIM T.M. AUDENAERT <i>Ghent University (Ghent, Belgium)</i></p>
9:00-9:30	<p>Color Removal from Drinking Water with Ion Exchange: Regeneration with Zero Liquid Discharge</p> <p>PETER SJOERDSMA, BBA <i>Vitens NV (Leeuwarden, The Netherlands)</i></p>	<p>Seasonal Variation of Colored Dissolved Organic Matter in the Nelson River Estuary, Hudson Bay</p> <p>CÉLINE GUÉGUEN, Ph.D. <i>Trent University (Peterborough, Ontario, Canada)</i></p>	<p>Characterization of NOM as Precursors for Nitrosamines: Hydrophobicity, Molecular Weight, and Fluorescence</p> <p>CHENGKUN WANG <i>Tsinghua University (Beijing, China)</i></p>	<p>Dynamics and Characteristics of Dissolved Organic Matter at the Ardebil Lake Watershed, New York</p> <p>PHIL-GOO KANG <i>State University of New York (Syracuse, New York, USA)</i></p>	<p>Removal of NOM with Anion Exchange Resins and Its Impact on H₂O₂/UV Advanced Oxidation</p> <p>MADJID MOHSENI, Ph.D. <i>University of British Columbia (Vancouver, British Columbia, Canada)</i></p>
9:30 – 10:00	<p>Molecular Characteristics and Differences of Effluent Organic Matter Treated by Integrated Fixed Film Activated Sludge (IFAS), Activated Sludge and Dentrification</p> <p>MICHAEL GONSIOR, Ph.D. <i>Linköping University (Linköping, Sweden)</i></p>	<p>Optical Analysis of Chromophoric Dissolved Organic Matter as a Tracer of Organic Matter in the Neuse River Estuary, Eastern North Carolina</p> <p>JENNIFER L. DICKSON BROWN <i>North Carolina State University (Raleigh, North Carolina, USA)</i></p>	<p>Comparison Between Formation Potential of Chloroacetic Acids by Hydrophobic Hydrophilic NOM Fraction with Standards of Fulvic-Humic Acids and Raw Water</p> <p>CARMEN LILIANA DUARTE PINEDA <i>Universidad del los Andes (Bogotá, Colombia)</i></p>	<p>Origin, Signature, and Interaction of Coal Bed Methane Produced Water NOM with Inorganic Solutes</p> <p>KATHARINE G. DAHM <i>Colorado School of Mines (Golden, Colorado, USA)</i></p>	<p>Changes in Biodegradability and Molecular Weight of NOM under UV/H₂O₂ Treatment</p> <p>MOHAMMAD MAHDI BAZRI <i>University of British Columbia (Vancouver, British Columbia, Canada)</i></p>

10:00 am to 10:30 am Networking Break Pacific Ballroom

Session 8: 10:30 am to 12 noon

	Track A	Track B	Track C	Track D	Track E
	Emerald Bay I	Emerald Bay II	Emerald Bay III	Balboa Bay I	Balboa Bay II
	A8: Treatment and Removal 8	B8: Molecular Characterization 5	C8a: Treatment	D8: Membranes 4	E8: Advanced Oxidation 4
	Moderator: Chris W.K. Chow, Ph.D.	Moderator: Priv. Doz. Dr. P. Schmitt-Kopplin	Moderator: Michael C. Dodd, Sc.D.	Moderator: Gary L. Amy, Ph.D.	Moderator: Ewa Lipczynska-Kochany, Ph.D., Sc.D.
10:30 – 11:00	Destruction of Organic Matter in Water Using Ultraviolet Light RANDY COOPER <i>Ultraviolet Sciences, Inc. (San Diego, California, USA)</i>	Ultrahigh Resolution Mass Spectrometry: Characterization of NOM in Seawater NURIA CORTÉS-FRANCISCO <i>Spanish Council for Scientific Research (Barcelona, Spain)</i>	Effects of NOM on the Accumulation of Inorganic Contaminants in Drinking Water Distribution Systems CHING-YU PENG <i>University of Washington (Seattle, Washington, USA)</i>	On Effluent Organic Matter and the Fouling of Low Pressure Filtration Membranes FELICITY A. RODDICK, Sc.D. <i>RMIT University (Melbourne, Australia)</i>	Using Rapid Background Hydroxyl Radical Scavenging Measurement to Understand OH Radical Reactivity of NOM in AOPs ERIC ROSENFELDT, Ph.D., P.E. <i>Hazen and Sawyer (Fairfax, Virginia, USA)</i>
11:00 – 11:30	Advanced Separation Technology Application for NOM Removal from a Freshwater Supply PROF. ANDREA G. CAPODAGLIO <i>University of Pavia (Pavia, Italy)</i>	Transparent Exopolymer Particles (TEP): A Frequently Ignored, But Extremely Active Component of NOM UTA PASSOW, Ph.D. <i>Marine Science Institute University of California, Santa Barbara (Santa Barbara, California, USA)</i>	Extracellular Polymeric Substances and Their Interaction with the Fate and Transport of the Anthropogenic Micropollutants in Activated Sludge Processes LINDA Y. TSENG <i>University of California, Irvine (Irvine, California, USA)</i>	Comparison of Two Fractionation Strategies for Characterization of Effluent Organic Matter (EfOM) and for Diagnosing Causes of Low-Pressure Membrane Fouling BRIAN A. DEMPSEY, Ph.D. <i>Pennsylvania State University (University Park, Pennsylvania, USA)</i>	Role of Biological Activated Carbon on UV/H ₂ O ₂ -Treated Water quality SIVA R. SARATHY, Ph.D. <i>Trojan Technologies (London, Ontario, Canada)</i>
11:30 – 12:00		Molecular Characterization of Organic Compounds in Atmospheric Aerosols ALEXANDER LASKIN, Ph.D. <i>Environmental Molecular Sciences Laboratory, Pacific Northwest National Laboratory (Richland, Washington, USA)</i>	C8b: Special Policy Session for Students Development of Wastewater Law in California JOSHUA L. CLEAVER <i>Thomas Jefferson School of Law (San Diego, California, USA)</i>	Wastewater NOM Composition Following Chemically Enhanced Primary Treatment and Microfiltration GRAHAM J.G. JUBY, Ph.D., P.E. <i>Carollo Engineers, Inc. (Fountain Valley, California, USA)</i>	UV-Based Advanced Oxidation for NOM Degradation and Removal: Impacts on Characteristics, Biodegradability, and DBP Formation Potential MAJDID MOHSENI, Ph.D. <i>University of British Columbia (Vancouver, British Columbia, Canada)</i>

12 noon to 1:30 pm Lunch Pacific Ballroom

Special Luncheon Speaker:

Susan D. Richardson, Ph.D.

Research Chemist, United States Environmental Protection Agency
National Exposure Research Laboratory (Athens, Georgia, USA)

“The Next Generation of Drinking Water Disinfection Byproducts: Occurrence, Formation, and Toxicity”



PROGRAM: FRIDAY, JULY 29

Session 9: 1:30 pm to 3:00 pm

	Track A	Track B	Track C	Track D	Track E
		Emerald Bay II	Emerald Bay III	Balboa Bay I	Balboa Bay II
		B9: Molecular Characterization 6	C9: Environmental Fate and Transport 2	D9: Membranes 5	E9: Extreme Environments
		Moderator: Christopher L. Osburn, Ph.D.	Moderator: Martha J.M. Wells, Ph.D.	Moderator: Jana Safarik	Moderator: Nancy W. Hinman, Ph.D.
1:30 – 2:00		Isolation and Characterization of Biomarkers for Fresh and Marine Waters BARBARA A. COTTRELL <i>University of Toronto, Scarborough (Scarborough, Ontario, Canada)</i>	Is Dissolved Organic Matter a Protective Agent Versus Non-Polar Hazardous Organic Pollutants (HOPs) in Drinking Water? MENG-HORNG (CHRIS) HSU, D.ENV. <i>University of California, Los Angeles (Los Angeles, California, USA)</i>	Hollow-Fiber Filtration for Water Reclamation: Nanoscale Particles and Membrane Fouling JOSHUA SMERALDI <i>University of California, Irvine (Irvine, California, USA)</i>	Characteristics of NOM in Different Yellowstone Hot Springs MICHAEL GONSIOR, PH.D. <i>Linköping University (Linköping, Sweden)</i>
2:00 – 2:30			Involvement of NOM in the Photochemical Fate of Beta-Blockers in Water HAOMIN XU, PH.D. <i>University of California, Irvine (Irvine, California, USA)</i>	Electroadsorptive Filter Media for Reduction of Membrane Biofouling Rodney S. Komlenic <i>Ahlstrom Filtration LLC (Mt. Holly Springs, Pennsylvania, USA)</i>	UV Radiation and Dusty Skies Influence the Quality of Dissolved Organic Matter in Alpine Environments NATALIE MLADENOV, PH.D. <i>University of Colorado at Boulder (Boulder, Colorado, USA)</i>
2:30-3:00		Characterize NOM in Typical China Water Source Using HPLC-SEC with Continuous Wavelength UV Absorbance Detector DR. MINGQUAN YAN <i>Peking University (Beijing, China)</i>			Complexation of Ferric Iron by Soluble Microbial Products of Acidophilic Heterotrophs and the Resulting Effect on Pyrite Oxidation TESFAYOHANES W. YACOB <i>University of Colorado at Boulder (Boulder, Colorado, USA)</i>

3:00 pm Conference Adjourns