

Report from 2011 Joint World Congress and Exhibition

On May 23-27, 2011 more than 515 delegates from 43 countries gathered in Paris at the CAP 15 International Center of Businesses and Congresses for the IOA/IUVA 2011 Joint World Congress and Exhibition consisting of the 20th IOA World Congress and the 6th IUVA World Congress.

Dr. Sylvie Baig, IOA President opened the Congress and welcomed delegates. She reviewed the success of combined IOA/IUVA Congresses, summarized the IOA mission, and the IOA organization and activities. She then summarized the use of ozone to solve environmental problems.



Drs. Sylvie Baig and Bertrand Dussert welcome delegates

Dr. Bertrand Dussert, IUVA President also welcomed delegates, summarized the IUVA mission and objectives and commented on the expanding number of UV applications. He commented that IUVA considers IOA a sister organization.

Sylvie Baig then summarized the Congress objectives and introduced Prof. Michael Roustan who outlined the technical program with special credit given to Michael Templeton for coordinating the UV sections and Dr. Renate Viebahn for coordinating the medical sessions.

The opening session then continued with three keynote addresses.

- Durk Kroll Treasurer and Director of the Water supply and sanitation Technology Platform (WssTP) reviewed challenges in water supply and sanitation. 60% of the earth's population lives on coastal areas. Major challenges are how to address research and innovation based on the water cycle. He also introduced ACQUEAU, an industry driven group to boost growth and innovation in the water sector. Focus of this group is on membrane technologies,

disinfection and advanced oxidation with interest on reducing byproducts of ozonation



Durk Kroll of WssTP

- Kerwin Rakness and Pierre-Andre Liechti, IOA Board Members summarized the implementation and modification of the Los Angeles Aqueduct Filtration (LAAFP). When the plant was first installed in 1987, it was one of the first large oxygen fed plants (cryogenic) and produced 6% ozone at a power consumption of 7.6 kwh/kg; since modification with new technology generators, the plant produces 10% ozone at 8.0 kwh/kg. Since the installation of this plant, there was a gradual shift from air fed ozone generation to oxygen fed, with most of the plants being constructed today using oxygen. The protocol for verification of the original LAAFP project set a precedent for future testing of other systems.



Kerwin Rakness and Pierre Liechti provide update on recent technology developments



Gary Krill provides update on New York City water supply

- Gary Krill, CDM, reviewed the implementation of large-scale UV treatment in New York City. The installed system treats 40 mgd water and offers 3 log inactivation, and was installed to avoid the necessity for filtration.

TECHNICAL PROGRAM



Prof. Roustan Introduces Technical Program

Synthesis and conclusions of the scientific programme

By Michel Roustan, Emeritus Professor, National Institute of Applied Sciences, Toulouse, France

The scientific program has been arranged in order to present a **highly integrated content** with 4 parallel tracks, all well-attended during three days. 15 sessions were proposed:

- 7 Joint IOA / IUVA sessions;
- 5 Specific IOA sessions;
- 3 Specific IUVA sessions

Session topics were connected to three major application fields:

- Environmental and human health protection,
- Industrial manufacture and conditioning
- Medical therapy

The final programme included 278 presentations

- > 3 invited lectures in opening session
- > 6 keynote lectures (30 min)
- > 134 long oral presentations (20 min)
- > 135 short oral presentations (5 min) with poster exhibition

Authors and co-authors of the papers ensured a **very strong international representation**. 45 countries were present, with over 20% of papers issued from outside border collaborations.

Main features were:

- Wide spreading of fundamental studies on Oxidation and Compounds
- Enlargement of possible applications water / air & gas / soil / industry / agrifood / commercial / medicine
- Market dynamics
- Enhancement of international collaboration
- Feedback from data get in full scale plants design stage and operation are the driving force for next research works and innovation;
- The short presentation (5 min) plus the discussions around the poster were well appreciated.
- A large number of presentations were made by PhD students.



Meeting Rooms were often filled to capacity

The following chart shows the breakdown of submitted papers by IOA regional group. Nearly half the papers were outside the EA3G group, which is quite remarkable considering the present economic conditions and cost of travel.



World Congress paper distribution

AWARDS

There were a number of awards presented at this conference during the closing ceremonies.

Morton J. Klein Medal of Excellence

The Morton J Klein Medal of Excellence recognizes contributions of the highest order to the International Ozone Association in commemoration of the clear vision, diplomatic proficiency, and unparalleled leadership which characterized the life of Morton J. Klein.

The Medal for 2011 was awarded to:

- Robin Lowndes, *UK*
- Barry Loeb, *USA*
- Prof. Hiroshi Tsuno, *Japan*
- Prof. Gilbert Gordon, *USA*

Messrs. Lowndes and Loeb accepted the Medal at the ceremonies. Prof. Tsuno and Gordon were unable to attend the closing ceremonies and their Medal will be presented at the Toronto Conference.



Robin Lowndes accepts Morton Klein Award of Excellence

Honorary Members

Honorary membership is an award to recognize outstanding contributions towards furthering the ideals and objectives of the International Ozone Association.

Honorary Membership was awarded to:

- Dr. Jean-Pierre Duguet, *France*
- Prof. Isao Somiya, *Japan*
- Dr. Sylvie Baig, *France*



Robin Lowndes presents Honorary Membership to Sylvie Baig

Harvey Rosen Award

The Harvey M. Rosen Memorial Award was established in 1989 to recognize the best paper published in OS&E during the two-year period between World Congresses. Dr. Harvey M. Rosen was a prime mover behind the establishment of the International Ozone Association and of OS&E, the Journal of the Association. It was Harvey Rosen who recognized early in the 1970s the need for the establishment of an ozone association, and then pressed for the creation (in 1979) of a peer-reviewed technical journal dealing with all aspects of ozone technologies. Recipients of the Rosen Award are determined by consensus polling of the members of the Editorial Board of OS&E every two years.

The winning paper for the years 2009-2010 was: “Advanced Oxidation Treatment of Drinking Water: Part I. Occurrence and Removal of Pharmaceuticals and Endocrine-Disrupting Compounds from Lake Huron Water”. The paper was coauthored by Mohammad Feisal Rahman, Earnest Yanful, Saad Jasim, Leslie Bragg, Mark Servos Souleymane Ndongue and Devendra Borikar. (Canada)

Dr. Saad Jasim, PAG President and Director, International Joint Commission, accepted the award on behalf of the co authors..



Dr. Saad Jasim receives Harvey Rosen Award

Willy Masschelein Prize

The Willy Masschelein Prize is awarded for original research revealing some unprecedented knowledge on any of the fundamental aspects of the industrial generation and the applications of ozone and derived oxidants. The prize committee, who reviewed the research theses submitted as Prof. A. Bin, Prof. R. Munter, Prof. M. Roustan, Dr. J. Kruithof and Dr. A. Ried. The prize includes a cash award and was sponsored by Degrémont and Veolia.

The award for 2011 was given to Dr. P. Mandel (France Université Rennes under Pr. Dominique Wolbert) for the work *“Modeling Ozonation Processes for Disinfection By-Product Control in Potable Water Treatment: From Laboratory to Industrial Units”*.



Achim Ried presents Willy Maccehelein Prize to Dr. P. Mandel

Student Awards

Special student awards were given, which include a one-year

membership to IOA-EA3G and a copy of the proceedings of the past ten IOA conferences.

The **Best Student Paper** was awarded to Adriana Maria Lotito (Italy) for the paper *“Textile wastewater treatment by ozone integration in a Sequencing Batch Biofilter Granular Reactor”*.



Adriana Maria Lotito - Best Student Paper

The **Best Student Poster Presentation** was awarded to Yaal Lester (Israel) for the paper *“Effect of Alginic acid, Peptone, NOM and Alkalinity on the O₃ Process: Degradation of Cyclophosphamide”*



Yaal Lester - Best Student Poster

The **Young Peoples Award** was given to Fernando Periera et al. (Spain, Portugal) for their paper and poster presentation, *“Catalytic ozonation of organic pollutants using nanocarbon materials grown on a macro structured support”*.

A special prize for the **Best Poster** was given to Alexey Ignatev (Russia) for the work *“Mathematical modeling of aqueous*

ozonation processes”.



Alexey Ignatev - Special Prize - Best Poster

EXHIBITION



The Congress was organized so that the opening reception and coffee breaks were held in the exhibition area. The seventeen companies exhibiting were:

- ▶ 2B Technologies (USA), www.twobtech.com
- ▶ Abiotec UV (France) www.abiotec.fr
- ▶ AIRSEP Corporation (USA) www.airsepcpd.com
- ▶ ATI Analytical Technologies (USA) www.analyticaltechnology.com
- ▶ BMT-OSTI (Germany, USA) www.bmt-berlin.de/
www.osti-inc.com
- ▶ Calgon Carbon Corporation (USA) www.calgoncarbon.com/uv
- ▶ Degrémont Technologies – Ozonia www.degremont-technologies.com
- ▶ Dr. J Hänslér GmbH – OZONOSAN (Germany) www.ozonosan.de

- ▶ HERAEUS Nobelight GmbH (Germany) www.heraeus-noblelight.com/en
- ▶ IN USA Inc. (USA) www.inusacorp.com
- ▶ ITT Water & Wastewater Herford GmbH (Germany) www.ittwww.com
- ▶ NEDAP Light Controls (Netherlands) www.nedaplightcontrols.com
- ▶ OAS Sweden AB (Sweden) www.oas.se
- ▶ PCI (USA) www.pcigases.com
- ▶ STATIFLO International Limited (UK) www.statiflo.net
- ▶ SVAROG (Russia) www.svarog-uv.org
- ▶ TROJAN Technologies Deutschland GmbH (Germany) www.trojanuv.com



The Organizing Committee thanks the sponsors for their support and hope they had a successful exhibition experience!

TECHNICAL TOURS



Introduction to Eau de Paris plants utilizing both ozone and UV

Three technical tours were offered showcasing both ozone and UV operating facilities:

- ▶ Choisy le Roi and Méry sur Oise Drinking Water Plants
- ▶ Côte de Nacre Wastewater Treatment Plant and D-Day Museum of Arromanches
- ▶ Orly and Joinville Drinking Water Plants

Your editor visited the Côte de Nacre Wastewater Treatment Plant in the Normandy region. This plant treats sewage for several villages with a seasonal population of 97,000. The raw sewage undergoes a full pretreatment including mechanical screening, degreasing and desanding, biological treatment with activated sludge with two stages for carbon and nitrogen removal. After clarification, the purified water is further treated using tertiary sand filtration and final ozonation for disinfection. Ozone was provided from (2) 10 kg/h Ozonia air-fed generators providing a dosage of 12 g/m³. The effluent is then discharged during high tide at 15 meters depth and 2.5 km from the coastline.

At the conclusion of the tour, the group visited the Normandy coastline and the D-day museum of Arromanches. This was a memorable visit.



Ozone Generators at Côte de Nacre WWTP

SOCIAL EVENTS

The Congress provided ample time for social interaction, beginning with the opening reception at CAP 15 on Sunday evening. Conference lunches were held on the famous Bateaux Mouches with a daily luncheon cruise on the Seine.

Accompanying persons were offered the choice of tours to Giverny and Versailles.

The closing banquet was held at the historic restaurant, La Bonne Franquette, located in the heart on Montmartre. This restaurant was the meeting for many famous artists: Pissarro, Cézanne, Renoir, Monet and Vincent Van Gogh... More than

two hundred attended the banquet, which featured a classic French meal and entertainment.



Dinner at La Bonne Franquette

At the conclusion of the dinner, Sylvie Baig thanked all for their participation in the Congress, introduced many of the committee workers and then introduced Jeff Neemann as the incoming IOA President for 2012.



Sylvie Baig introduces Jeff Neemann, next IOA President

SPONSORS

Sponsors help defray the cost of conference by providing funds and services. The IOA deeply appreciates the contributions of the many sponsors for this World Congress.

Platinum

- ▶ Degremont Technologies-Ozonia
- ▶ ITT Water and Wastewater Herford GmbH

Silver

- ▶ Phillips Lighting B. V.

General Sponsorship

- ▶ AIRSEP Corporation
- ▶ Chart Industries
- ▶ Eau de Paris
- ▶ Heraeus Noblelight GmbH
- ▶ SEDIF
- ▶ Suez Environnement
- ▶ TROJAN Technologis
- ▶ Union des Industries de l'Eau et de l'Environnement

Comments from Major Sponsors

The major (Platinum) sponsors were asked to summarize their experience at the congress. Their comments follow:

www.degreмонтtechnologies.com

OZONIA *Degrémont Technologies – Ozonia*

We, at OZONIA, are very happy that the IOA/IUVA congress was held in Paris in 2011. We believe it was a very good opportunity to present our technologies. OZONIA, as a global leader in ozone and in UV, was pleased to have supported the congress and we hope that it has provided a dynamic platform for all participants to exchange their expertise and knowledge.

Once again, OZONIA would like to thank the organizers for the work which was done. It was also a great occasion to meet some of our old ozone and UV friends as well as to see the advancements in those technologies. Things are safe in the hands of the IOA and the IUVA, letting us perceive good business perspectives for the future.

To finish, I would like to underline the energy and the motivation all participants have given to make this congress a success. We are thrilled to take part in the next congress and we are looking forward to exchange and work with you to address the challenges we all face.

Farchad Kaviani
Vice President Sales & Marketing
OZONIA, Degrémont Technologies Ltd.

 **ITT** | **WEDECO** *ITT Water and Wastewater*

It was really a pleasure for ITT to join this congress. These kinds of events are a very good opportunity to meet with many interested people in UV and Ozone.

It is a valuable platform for cross functional discussions with young and senior professionals from all over the world.

These kinds of exchange between researchers, consultants, operators, manufactures and regulators are very helpful for our business.

Dr. Achim Ried
Manager Application Development
ITT Water & Wastewater Herford GmbH

ORGANIZING COMMITTEES

The success of this conference was, in no small part, due to the diligent efforts of the Conference Committees. These committees arranged for the conference concept, the technical program and all social events.

Co-chairs

- > Sylvie BAIG, France - IOA President
- > Bertrand DUSSERT, USA - IUVA President

Organizing Committee

- > Sylvie BAIG, France | IOA President, IOA-EA3G Past President
- > Bertrand DUSSERT, USA | IUVA President
- > Alain LASALMONIE, France | IOA-EA3G Secretary-Treasurer
- > Paul OVERBECK, USA | IUVA Executive Director
- > François MAUVAIS, France | IOA-EA3G Secretary-Treasurer
- > Achim RIED, Germany | IOA-EA3G President
- > Chris SCHULZ, USA | IUVA Treasurer
- > Jeff NEEMANN, USA | IOA Treasurer and President Elect

Scientific Committee**Co-Chairs**

- > Michel ROUSTAN, Emeritus Professor, INSA Toulouse, FR
- > Michael TEMPLETON, Lecturer, Imperial College London, UK
- > Heinz ANDERLE, Baxter Bioscience, AU
- > Sylvie BAIG, Dr., Degrémont, FR

- > Margarete BUCHELI, Dr., Gas Wasser Abwasser, CH
- > Stéphane BROSILLON, Professor, University of Montpellier, FR
- > Eric CHAUVEHEID, Dr., VIVAQUA, BE
- > Hubert DEBELLEFONTAINE, Professor, INSA, Toulouse, FR
- > Zdravka DO-QUANG, Dr., CIRSEE Suez-Environnement, FR
- > Jean-Pierre DUGUET, Dr., Veolia, FR
- > Sanitago ESPLUGAS, Professor, University Barcelona, SP
- > Nigel GRAHAM, Prof, Imperial College London, UK
- > Nathalie KARPEL VEL LEITNER, Dr., CNRS, University of Poitiers, FR
- > Florencio MARTIN, Veolia Environnement RI, FR
- > Maria ORTA DE DELASQUEZ, Dr., Instituto de Ingeniera, UNAM, MX
- > Achim RIED, Dr., ITT W&W Herford GmbH, DE
- > Geraldo SANT'ANNA, Emeritus Professor University Rio de Janeiro, BZ
- > Michael SIEVERS, Professor, CUTEC-Institut, Leibeizsfr, DE
- > Renate VIEBAHN-HANSLER, Dr., Dr.J.Hänsler GmbH, DE
- > Urs VON GUNTEN, Professor EAWAG, CH

PROCEEDINGS

The proceedings, which include the conference program, all abstracts and submitted technical presentations, are available from the EA3G group for €150 IOA members and € 200 non-members. For more information, visit www.ea3g.org.

In summary, this was an outstanding conference and it is hard to see how it could have been any better. The hard work of the organizing committees and their attention to all the details ensured that all who attended had a wonderful experience. Another factor in the good experience is the camaraderie between so many IOA members, both senior and new. We now can only look forward to the next World Congress in Las Vegas in 2013!



Past IOA President Walter Blogoslavski provides update on ozone applications in seafood.



Lunch aboard the Bateaux Mouches



The ever busy registration desk

