

The 16th International Conference on
Advanced Oxidation Technologies for
Treatment of Water, Air and Soil
(AOTs-16)

Call for Papers
Wednesday, June 30, 2010 is the Absolute Deadline for
Submitting Abstracts

Website: www.redoxtech.com

Town & Country Resort, San Diego, California
November 15-18, 2010

International Organizing Committee

Jaleel K. Ahmad, Babylon University, Iraq

Henrik Anderson, Technical University of Denmark

Shin-ichi Aoqui, SOJO University, Japan

Antonio Arques, Universidad Politécnica de Valencia, Spain

Idil Arslan-Alatonl, Istanbul Technical University, Turkey

Isil Akmehmet Balcioğlu, Bogazici University, Turkey

Miray Bekbölet, Bogazici University, Turkey

Alberto E. Cassano, INTEC, Argentina

Daniel Cassidy, Western Michigan University, USA

Christos Comninellis, EPFL, Switzerland

William Cooper, University of California Irvine, USA

John Crittenden, Georgia Tech, USA

Dionysios Dionysiou (Co-Chair), University of Cincinnati, USA

Kenji Ebihara, Kumamoto University, Japan

Santiago Esplugas, University of Barcelona, Spain

Chantal Guillard, CNRS, Universitu Lyon-1, France

Anastasia Hiskia, NCSR Demokritos, Greece

Nilsun Ince, Bogazici University, Turkey

Wilson Jardim, UNICAMP, Campinas-SP, Brazil

Shinji Kambara, Gifu University, Japan

Zbigniew Kolacinski, Instytut Aparatów Elektrycznych PL, Poland

Lev Krasnoperov, New Jersey Institute of Technology, USA

Gianluca Li Puma (Co-Chair), University of Nottingham, United Kingdom

Gregory A. Loraine, Dynaflo Inc, USA

Amaia Menéndez Ruiz, University of the Basque Country, Spain

Stephen Mezyk, California State University, USA

Bruce J. Mincher, Idaho National Engineering Laboratory, USA

Rino Morent, Ghent University, Belgium

Takao Namihira, Kumamoto University, Japan

Sherine O. Obare, Western Michigan University, USA

Shigera Ono, Tokyo City University, Japan

Kevin O'Shea, Florida International University, USA

Leonardo Palmisano, University of Palermo, Italy

Montserrat Pérez Moya, Universitat Politècnica de Catalunya, Spain

Gareth Price, University of Bath, United Kingdom

Slavcho Rakovsky, Bulgarian Academy of Sciences, Institute of Catalysis, Bulgaria

Muhammed A. Rauf, UAE University, United Arab Emirates

Astrid Rehorek, Cologne University of Applied Sciences, Germany

Susan Richardson, Environmental Protection Agency - EPA, USA

Luigi Rizzo, University of Salerno, Italy

Felicity Roddick, RMIT University, Australia

Krzysztof Schmidt-Szalowski, Warsaw University of Technology, Poland

David L. Sedlak, University of California - Berkeley, USA

Adrian M. T. Silva, University of Porto, Portugal

George a Sorial, University of Cincinnati, USA

Piotr Stepnowski, University of Gdansk, Poland

Rominder P. S. Suri, Temple University, USA

Katsuyuki Takahashi, Shishido Electrostatic, Ltd, Japan

Tuula Tuhkanen, Tampere University of Technology, Finland

Peter J. Vikesland, Virginia Tech, USA

Hans-Erich Wagner, Ernst-Moritz-Arndt-Universitaet Greifswald, Germany

T. David Waite, The University of New South Wales, Australia

Chobei Yamabe, Saga University, Japan

Yoshio Yoshioka, Kanazawa Institute of Technology, Japan

Quan Zhuang, CANMET Energy Natural Resources Canada

Conference Correspondence

Hussain Al-Ekabi, Ph.D.

President, Redox Technologies, Inc., The University of Western Ontario Research Park
100 Collip Circle, Suite 110, London, Ontario N6G 4X8, Canada
Phone: (519) 858-5055; Fax: (519) 858-5056
E-mail: Hussain@alekabi.com; Website: www.redoxtech.com

The scope of the Conference

There has been remarkable progress in various areas of AOTs over the past two decades. The research, development, demonstration and commercialization of AOTs have attracted global interest from academia, government research laboratories and industry. In recent years, engineering firms have been paying considerable attention to AOTs for the following reasons: (1) wider recognition of the superiority of the AOTs in degrading environmental compounds in aquatic and subsurface that are otherwise persistent, (2) commercial availability of the technologies through several vendors and manufacturers, and (3) improvements in the design of equipment that makes the cost of AOTs comparable to the cost of alternative technologies.

This international conference has been bringing together interested parties from universities, research institutions and industry to exchange information, views, experience and perspectives. AOTs-16 presents the most current findings generated at the laboratories of universities and research institutions, as well as in the field by the practitioners. Abstracts are being solicited in the following areas:

A. Chemical Oxidation:

- Ozone
- H₂O₂
- Dark Fenton
- Permanganate
- Persulfate

B. UV-Oxidation:

- UV/H₂O₂
- Vacuum UV
- Photo-Fenton
- Other Photochemical Processes

C. Electron Beam & Gamma Irradiation

D. Non-Thermal Plasma Technologies

E. Catalytic Oxidation and Reduction Technologies

F. Electrochemical Oxidation and Reduction Technologies

G. Supercritical and Subcritical Water Oxidation

H. Electrohydraulic Discharge Technologies

I. UV - Disinfection

J. Chemical Disinfection

K. Biological Oxidation and Reduction Processes

L. In-Situ Chemical Oxidation

M. Integration of AOTs with Biological Processes

Invited Speakers (some titles are tentative)

Comparing UV/S₂O₈ to UV/H₂O₂ for Micropollutant Removal in Ground Water

Henrik Anderson

Technical University of Denmark

The Role of Catalytic Nano Dot Derived from Organ-metal Solution and its Application Using a New CVD Process with Arc Discharge System

Shin-ichi Aouki

SOJO University, Japan

Organic Photocatalysts for the Elimination of Pollutants and Model Compounds

Antonio Arques

Universidad Politécnica de Valencia, Spain

Effect of (Photo)chemical Advanced Oxidation Processes on the Biodegradability and Toxicity of Industrial Pollutants

Idil Arslan-Alatonl

Istanbul Technical University, Turkey

Antibiotic Pollution Control by AOPs

Isil Akmehmet Balcioğlu

Bogazici University, Turkey

Significance of Parameters for the Implementation of Oxidative Degradation of Natural Organic Matter

Miray Bekbölet

Bogazici University, Turkey

The Importance of Bench-Scale Treatability Studies as a Decision Making Tool for ISCO

Daniel Cassidy

Western Michigan University, USA

Electro-generation of Free Hydroxyl Radicals Using Boron Doped Diamond (BDD) Anodes

Christos Comninellis

EPFL, Switzerland

Recent Advances in Oxidation Processes for Treating Pharmaceutical Compounds in Water

William Cooper

University of California Irvine, USA

Rational Design of Advanced Oxidation Processes Using Computational Chemistry

John Crittenden

Goergia Tech, USA

Destruction of Cyanotoxins in Water Using UV/H₂O₂ Process

Dionysios Dionysiou

University of Cincinnati, USA

On-site Ozone Treatment for Agricultural Soil and Related Matter

Kenji Ebihara

Kumamoto University, Japan

Application of Ozone to Municipal Sewage Treatment for Water Reuse

Santiago Esplugas

University of Barcelona, Spain

Photocatalysis and Disinfection

Chantal Guillard

CNRS, Universitu Lyon-1, France

New advances in Polyoxometalate Photocatalysis

Anastasia Hiskia

NCSR Demokritos, Greece

Ultrasound-assisted Degradation of Anti-inflamators by Divalent and Zero Valent Iron: Case Study with Diclofenac

Nilsun Ince

Bogazici University, Turkey

Using Modified Fenton's Reaction in the Remediation of Soil Contaminated with Fuels

Wilson Jardim

UNICAMP, Campinas-SP, Brazil

Progress in Radical Injection Techniques for Environmental Control

Shinji Kambara

Gifu University, Japan

CNTs Synthesis in a Microwave Plasma

Zbigniew Kolacinski

Instytut Aparatów Elektrycznych PL, Poland

Mechanism and Modeling of Chemical Reactions in Non-thermal Plasma

Lev Krasnoperov

New Jersey Institute of Technology, USA

Gianluca Li Puma (Waiting for the title of his lecture)

University of Nottingham, United Kingdom

Application of Submerged Hydrodynamic Cavitation Jets (DynaJets®) for Oxidation of Trace Organic Micropollutants

Gregory A. Loraine

Dynaflow Inc, USA

Decolorization of Dye Wastewater by Different Advanced Oxidation Methods

Amaia Menéndez Ruiz

University of the Basque Country, Spain

Removing Steroidal Activity from Waters: Oxidizing and Reducing Radical Reactions

Stephen Mezyk

California State University, USA

Contrasting Nitration Mechanisms in Irradiated Acidic and Neutral Solutions

Bruce J. Mincher

Idaho National Engineering Laboratory, USA

Electric Wind Produced by Atmospheric Pressure Discharges : Application to Depollution and Airflow Control

Eric Moreau

University of Poitiers, France

Plasma-assisted Catalytic Reactors for Abatement of Volatile Organic Compounds

Rino Morent (Co-authors: A. Vandenbroucke, N. De Geyter, C. Leys)

Ghent University, Belgium

Investigation of Electric Discharge Sound in Atmospheric Pressure Plasma using Optical Wave Microphone

Toshiyuki Nakamiya

Tokai University, Japan

Recent Progress of Nano-seconds Pulsed Discharge and its Applications

Takao Namihira

Kumamoto University, Japan

Takao Namihira, Douyan Wang, Hidenori Akiyama Degradation of Persistent Organic Contaminants Using Functionalized Nanoscale Materials

Sherine O. Obare

Western Michigan University, USA

Plasma Surface Modification Using Atmospheric Pressure Microwave Plasma

Shigera Ono

Tokyo City University, Japan

Advanced Oxidation of Cyanotoxins

Kevin O'Shea

Florida International University, USA

TiO₂ Heterogeneous Photocatalysis as a Selective Tool for Organic Green Syntheses

Leonardo Palmisano

University of Palermo, Italy

Hydrogen peroxide dosage as influent factor in the photo Fenton process

Montserrat Pérez Moya

Universitat Politècnica de Catalunya, Spain

Using Ultrasound as an AOT for Treating Water

Gareth Price

University of Bath, United Kingdom

Kinetic and Mechanism of Ozone Degradation of Different Classes of Organic Compounds

Slavcho Rakovsky

Bulgarian Academy of Sciences, Institute of Catalysis, Bulgaria

Photocatalytic Degradation of Dyes

Muhammed A. Rauf

UAE University, United Arab Emirates

AOT's and the Degradation of Azo Dyes - Treatments as Single or Combined Technologies

Astrid Rehorek

Cologne University of Applied Sciences, Germany

Emerging Disinfection By-products and Other Contaminants in Drinking Water: The Ongoing Need for Removal Technologies

Susan Richardson

Environmental Protection Agency - EPA, USA

Evaluation of AOPs in Water and Wastewater Treatment by Ecotoxicity Tests

Luigi Rizzo

University of Salerno, Italy

Wastewater Treatment, Advanced Oxidation Processes and Organic Matter

Felicity Roddick

RMIT University, Australia

Hybrid Plasma-catalytic Systems for Conversion of Greenhouse Gases and VOC

Krzysztof Schmidt-Szalowski

Warsaw University of Technology, Poland

Production of Hydroxyl Radicals by Iron-containing Fenton Catalysts at Circumneutral pH Values

David L. Sedlak

University of California - Berkeley, USA

Synthesis and Characterization of Nanostructured Catalytic Materials for AOTs

Adrian M. T. Silva

Instituto Politécnico Nacional, Mexico

Enhancing Biological Oxidation of Hydrophobic Compounds under Dynamic Load in a Trickle Bed Air Biofilter

George a Sorial

University of Cincinnati, USA

Degradation of Ionic Liquids with AOTs

Piotr Stepnowski,

University of Gdansk, Poland

Rominder P. S. Suri (Waiting for the title of his lecture)

Temple University, USA

Water Remediation Using Pulsed Power Discharge under Water with Advanced Oxidation Process

Katsuyuki Takahashi

Shishido Electrostatic, Ltd, Japan

Technnology Assessment of State of the Art of on Site and In- Situ Remediation

Tuula Tuhkanen and Paula Cajal Marinosa

Tampere University of Technology, Finland

Effects of Particle Aggregation on Nanoparticle Reactivity

Peter J. Vikesland

Virginia Tech, USA

Spectroscopic Diagnostics of Filamentary Microplasmas

Hans-Erich Wagner

Ernst-Moritz-Arndt-Universitaet Greifswald, Germany

Production of Reactive Oxygen Species by Silver Nanoparticles - Implications for Bactericidal Activity

T. David Waite (Co-authors: Adele M. Jones, A. Ninh Pham)

The University of New South Wales, Australia

Ozone-zero Phenomena and Nitrogen Addition Effect on Ozone Generation in Pure Oxygen

Chobei Yamabe

Saga University, Japan

Atmospheric Pressure Electrical Discharge and the Application

Yoshio Yoshioka (Co-author: Naoki Osawa)

Kanazawa Institute of Technology, Japan

Non-thermal Plasma for VOCs and Odour Control

Quan Zhuang, CANMET Energy Natural Resources Canada

Call for Papers

Scientists, engineers, and business professionals who are interested in AOTs-16 are invited to submit abstracts of up to 500 words in English describing their work. All abstracts are due by **Wednesday, June 30, 2009**. In addition to the invited lectures (25 minutes each) listed above, about 20 additional abstracts will be chosen for short talks (15 minutes each) and the rest of abstracts will be presented in the poster session. Each poster will have 1.2 m x 1.2 m of display space.

Guidelines to Prepare Abstracts

Please follow the following guidelines in preparing your abstract(s):

- Type single space using, if possible, Times New Roman 12-point font (preferred);
- Keep all material within a one-inch margin on all sides;
- The title should be typed in boldface (Title Case, 14- points) centered at the top of the page;
- Leave a double space between the title and the names of the author(s);
- The names of the authors should be typed in boldface in single space, and then addresses of the authors in single space; underline the name of the presenting author;
- Leave a double space between the end of the addresses and the opening paragraphs;
- Abstracts should be sent, in Microsoft Word format, to Hussain Al-Ekabi (E-mail: hussain@alekabi.com).

Call for Exhibits

Companies conducting business related to the themes of AOTs-16 are invited to exhibit their products and/or services. Exhibits will be displayed throughout the conferences in a central area near the registration desks, coffee breaks, poster sessions and lecture rooms. The cost of an 8-ft x 10-ft booth is **\$2,250.00US** if payment is received on or before **Wednesday, June 30, 2009**, and **\$2,500.00US** if payment is received after that date. This includes two free registrations to attend the technical session of the conference. Please, reserve early, as space is limited, and will be served on a first come first serve basis.

Registration

The deadline for the early registration is **Wednesday, June 30, 2009**. The on-site registration starts on Sunday, **November 14, 2010**, 2:00 – 8:00 p.m. and will resume on Tuesday, November 15 at 7:30 a.m.

All registration fees are set in US dollars. The registration fees can be paid either by credit cards (Visa, Master Card or American Express) or by “Encoded Checks” in US funds drawn on a US bank account made payable to “Redox Technologies, Inc.”

Payment made by Visa will be converted, at our end, into their equivalents in US Dollars using the exchange rate of Bank of Canada. Payments made by a Master Card or an American Express Card

will be converted, at our end, into their equivalents in Canadian dollars using also the exchange rate of Bank of Canada. As a result, depending on the fluctuation of the exchange rate and potential fees that your credit card financial institution may apply for the conversion, payments by credit card may turn to be slightly higher than the actual amount stated on the registration form. Participants are also allowed to pay by cash for on-site registration only.

Meeting Site and Accommodation

AOTs-16 will be held at the Town & Country Resort, San Diego, California, USA. A block of rooms has been reserved at the Resort at a special group rate for the participants. The rate is **\$145.00US** for single or double beds per night. For reservations, please contact the reservation department of the resort by phone: 1-800- 772-8527 or (619) 291-7131 (ext. 3810) or by fax: (619) 294-4681. To obtain this rate, please inform the hotel that you are attending Redox Meetings. Please be advised that this block of rooms is being held at this special rate until **Friday, October 22, 2010**. After this date, we cannot guarantee the availability of rooms or the special rate. Please, book early to avoid disappointment.

Dates to Remember

Wednesday, June 30, 2010		Deadline for receiving abstracts
Wednesday, June 30, 2010		Deadline for receiving payments of early registration
Friday, July 30, 2010		Notification of the authors regarding their abstracts
Sunday, November 14, 2010	2:00 – 8:00 p.m.	On-site registration
Monday, November 15, 2010	8:30 a.m. – 5:30 p.m.	Technical sessions
Tuesday, November 17, 2010	8:30 a.m. – 5:30 p.m.	Technical sessions
Wednesday, November 18, 2010	8:30 a.m. – 5:30 p.m.	Technical sessions
Wednesday, November 17, 2010	7:00 – 9:00 p.m.	Banquet Dinner
Thursday, November 18, 2010	8:30 – 4:00pm	Technical Sessions
Thursday, November 18, 2010	4:00pm	Adjourn

REGISTRATION FORM

TiO₂-15 + AOTs-16

Town & Country Resort, San Diego, California, USA

November 15-18, 2010

➔ **PERSONAL DATA** (please print):

Mr. Ms. Miss Mrs. Dr. Prof. Name: _____

Professional Title: _____ Organization: _____

Mailing Address: _____

Phone: _____ Fax: _____ E-mail: _____

➔ **PRIMARY INTEREST** (please mark your primary interest): TiO₂-15 AOTs - 16

➔ **REGISTRATION FEES** (in US dollars):

Options for Registration	Early Registration (\$US)*, ** Paid Before June 30, 2010			Standard Registration (\$US)*, ** Paid After June 30, 2010		
	Students	Acad./ Gov.	Industry	Students	Acad./ Gov.	Industry
<input type="checkbox"/> TiO ₂ -15 + AOTs-16	400	575	650	500	675	750
<input type="checkbox"/> Exhibit Space	2,250			2,500		
Total Payment Enclosed						

*As in previous annual meetings, all participants, including the speakers, the members of the international organizing committees, and the sessions' chairs are expected to register and pay their registration fees.
**The registration fee covers the technical sessions, hot lunches, Banquet dinner and the coffee breaks.

➔ **METHODS OF PAYMENT**

Encoded check in US funds drawn on a US bank account payable to **“Redox Technologies, Inc.”**

Visa*** MasterCard*** American Express***

Credit Card No.: _____ Expiration Date: _____

Signature: _____

Cash (on-site registration only)

*** Payments by Visa will be charged directly in \$US while payments by MC or AMEX will be converted to their equivalents in Canadian dollars using the exchange rate of Bank of Canada.

➔ **PLEASE, MAIL/FAX YOUR REGISTRATION FORM ALONG WITH YOUR PAYMENT TO:**

Redox Technologies, Inc., UWO Research Park, 100 Collip Circle, Suite 110,
London, Ontario N6G 4X8 Canada

Phone: (519) 858-5055; Fax: (519) 858-5056; E-mail: hussain@alekabi.com