19th World Congress & Exhibition, Tokyo, Japan

International Ozone Association
31 August - 3 September 2009
Tower Hall Funabori, Funabori, Edogawa-ku, Tokyo, Japan
(draft)

Preliminary Congress Description

1. Purpose

Today, throughout the world, ozonation technologies have been widely used to establish the safe and comfortable life and production process in high-technology industry. This is because ozone has a strong oxidation capacity, no harmful residues after its decomposition, easy management and control characteristics. Accordingly, the ozonation technologies are greatly expected to play an important role in a wide variety of industries in future.

Meanwhile, in Japan, ozonation technologies have been also widely used to get tasty and safe drinking water, and expected to be improved for more effective and new capacity in water purification plants. Gradually, they have been also applied to spa, pool and aquarium for clear water, agriculture, food and beverage for disinfection and high technology production plant for clean-up. Additionally, they are expected to be adopted more in sewage and wastewater treatment field for water environment preservation and reuse of the treated wastewater.

The Ozone World Congress is held biennially, where researchers, engineers, consultants, and people concerned gather from all over the world for presentations and discussions of the results from their researches and experiences. Through the Ozone World Congress, all participants can get up-to-date information, knowledge and innovative ideas, surely contributing to the development of ozone science and technology.

It will be the third time for Japan to hold the Ozone World Congress in 2009, including the 7th congress (Tokyo, 1985) and the 13th congress (Kyoto, 1997). This congress should be a good opportunity to get up-to-date information of the science and technology developed in Japan as well as all over the world.

2. Topics Included

Main topics included in this congress are as follows;

- Disinfection
- Chemical and Biochemical Reactions
- Water Treatment
- Waste Water Treatment
- Air Treatment
- Bromate Formation and Control
- Emerging Contaminants
- Ozone Generation/Contacting
- Advanced Oxidation
- Small Ozonation Systems
- Cooling Tower Applications
- Food and Agricultural Applications
- Spa/Pool/Aquarium
- Industrial Applications
- UV technologies
- UV Reactor design/validation
- Medical Applications

3. Schedules of the Congress & Exhibition

	Monday 31 Aug. 2009	Tuesday 1 Sep. 2009	Wednesday 2 Sep. 2009	Thursday 3 Sep. 2009	Friday 4-5 Sep. 2009
Morning		Welcome & Preliminary Session	Oral & poster presentation, Exhibition	Oral & poster presentation, Exhibition	Special Technical Social tour (Over night to Kyoto)
Afternoon	Registration Exhibition	Oral & poster presentation, Exhibition Technical tour	Oral & poster presentation, Exhibition Technical tour	Oral & poster presentation	
Evening	Welcome reception			Gala night	

4. Technical tour (option)

Technical tour to visit ozone application facilities including the Asaka Water Purification Plant and the Shibaura reclamation Plant in Tokyo area will be prepared in the afternoon on Sep. 1 and 2, 2009.

5. Special technical tour (option)

2 days special tour on Sept. 4 and 5, 2009, to visit water and wastewater treatment plants in Kyoto Area will be

prepared. You can enjoy comfortable Super Express Train “Shinkansen” and historical Kyoto City.

6. Social tour (option)

Several social programs will be also prepared. You can enjoy Japanese historical, traditional and nice sightseeing spots.

7. Registration

Registration fees are shown in the following table

		Early bird registration Before April 30, 2009	Regular registration after May 1st, 2009
Technical session (including proceedings, exhibits & opening reception)	IOA, JOA members	45,000 JPY	50,000 JPY
	Non members	55,000 JPY	60,000 JPY
	Students	10,000 JPY	10,000 JPY
Gala night		10,000 JPY	15,000 JPY
Accompanying person (Welcome reception, Welcome & Preliminary Session, Exhibits and Gala night)		15,000 JPY	20,000 JPY
Technical tour		6,000JPY	6,000JPY
Special technical tour		50,000JPY	50,000JPY
Social tour		option	option

Visit: https://apollon.nta.co.jp/ozone2009-er/ IOA WC2009 Desk Nippon Travel Agency Co .,Ltd
TEL:81-3-5565-9895, FAX 81-3-5565-9899

8 Hotel Accommodation visit: https://apollon.nta.co.jp//ozone2009-eh/

9. Preliminary Technical Program (Tentative on April 1)
IOA International congress in 2009

	Sept. 1			Sept. 2			Sept. 3		
	Room 1	Room 2	Room 3	Room 1	Room 2	Room 3	Room 1	Room 2	Room 3
am 9:00 -12:05	Opening Ceremony			［4］	［5］	［6］	［14］	［15］	［16］
pm 1:30 -6:30	［17］	［2］	［3］	［8］	［9］ ［10］	［11］	［1］	［18］	［19］

Simultaneous Translation will be prepared in Room 1.

	Sept. 2		Sept. 3
	Room 4	Room 5	Room 4
am 9:00 -12:05	Medical Session	［7］	Medical Session
午後 1:30 -6:30	Medical Session	［12］ ［13］	Medical Session

○Water Purification: Session ［1］
○Emerginng Contaminants: Session ［2］
○Industrial Application: Sessions ［3］& ［11］
○Municipal Wastewater Treatment: Sessions ［4］& ［8］
○Advanced Oxidation Process: Sessions ［5］&［9］
○Byproducts and Control: Session ［6］
○Ozone Generation: Sessions ［7］& ［12］
○Agriculture-food-beverage application: Session ［10］
○Ozone Solubilization and Decomposition: Session ［13］
○Sludge Treatment: Session ［14］
○Air and Gas Treatment: Session ［15］
○Industrial Wastewater Treatment: Sessions ［16］& ［19］
○ＵＶ: Session ［17］
○Disinfection: Session ［18］
○Medical Application Session Medical

Presentation Programmee (Tentative on April 1)

This programmee is tentatively made for associated persons to understand presentation contents.
The presentation date and time and order of each paper will be changed because only persons who register with registration fee before May 31 can present and be recorded in the final programmee.

Sept. 1 (Tuesday) p.m.(13:30-18:30)

Session ［17］ at Room 1
○ＵＶ （Oguma）
Key note speech
145 UV treatment of water in Japan; applications, situations and developments
Ritsumeikan University Naoyuki Kamiko Japan
General presentation
24 UV/TiO2 for Removing Taste and Odour Compounds in Drinking Water: Influence of Water Composition and Destruction Mechanism
School of Engineering, The University of Newcastle Hoang N Tran Australia
38 Investigation of generation mechanisms of nitrite in UV irradiation
Department of Integrated Science and Engineering, Graduate School of Science and Engineering, Ritsumeikan University Nobuhito YASUI Japan
39 Hydraulic optimization of a single UV lamp placed perpendicular to the flow direction
B.A. Wols
48 Research on the Actinometer Corresponding to High Dose Range
Iwasaki Electric Yuuko Hiroto Japan
56 Distribution characteristics of light source in ultraciolet band
Japan Photo-Science Yuji Yamakoshi
58 Photo-transformation of amoxicillin during UV treatment and toxicological assessment of its intermediates
Department of Environmental Engineering, Yonsei University
Joon-Wun Kang Korea
60 Growth inhibition of indigenous Microcystis species in a lake using a medium-pressure UV treatment system
Dept. of Urban Engineering, The University of Tokyo Hiroshi SAKAI Japan
121 MELBOURNE WATER’S APPROACH TO ONE OF THE WORLD’S MOST COMPLEX WASTEWATER TECHNOLOGY TRIALS
Melbourne Water Corporation Mark Lynch Ausyralia

Session ［2］ at Room 2
○Emerginng Contaminants （Suzuki, Ikehata）
Key note speech
122 Role of ozonation in the destruction of EDCs and Pharmaceuticals
Applied R & D Center Shane Snyder USA
61 Application of O3 and O3/UV processes for the removal of PPCPs in secondary treated water: Energy consumption for the rffrctive PPCPs removal Kyoto University Iiho Kim Japan
General presentation
2 Removal of Bisphenol A from aqueous solution by ozonation
San Diego State University Temesgen Garoma USA
101 Removal Characteristics of EDCs by Ozonation
Graduate School of Engineering, Kyoto University Hiroshi TSUNO Japan
35 Perovskite catalytic ozonation of some pharmaceutical compounds in water
Departamento de Ingeniería Química y Química Física. Universidad de Extremadura
P. Pocostales Spain
88 REMOVAL OF PROPRANOLOL IN AQUEOUS PHASE BY OZONATION
Departament d’Enginyeria Química, Universitat de Barcelona. Renato F. Dantas
127 REMOVAL OF ENDOCRINE DISRUPTING COMPOUNDS（EDCS）AND PHARMACEUTICALS AND PERSONAL CARE PRODUCTS（PPCPS）FROM DRINKING WATER USING ADVANCED OXIDATION PROCESS

Dept. of Civil and Environmental Engineering, University of Western Ontario M.F. Rahman Canada
22 PEROXIDATION OF CHLOROPHENOLS IN SOIL
Department of Chemical Engineering, Tallinn University of Technology Anna Goi Estonia

Session ［3］ at Room 3
○Industrial Application （Kuzumoto, Nishijima, Lezmik, Liechti）
Key note speech
73 Ozone: Science & engineering 30 yeras of progress
Ozone science & engineering Barry L. Loeb USA
General presentation
8 Direct Plasma Degradation of Perfluorooctanoic Acid in Gas-Liquid Two-Phase Flow Reactor
Dept. of Electrical and Electronic Eng.,Tokyo Institute of Technology K. Sasaki Japan
9 Decomposing Mechanisms of Persistent Organics in Water Using Direct Plasma Method
Dept. of Electrical and Electronic Eng., Tokyo Institute of Technology Koichi Yasuoka Japan
16 THE OZONE LAUNDRY HANDBOOK A Comprehensive Guide for the Proper Application of Ozone in the Commercial Laundry Industry
RICE International Consulting Enterprises Rip G. Rice USA
15 ECONOMIC AND ENVIRONMENTAL BENEFITS OF OZONE IN OZONE LAUNDERING SYSTEMS
RICE International Consulting Enterprises Rip G. Rice USA
17 MICROBIOLOGICAL BENEFITS OF OZONE IN OZONE LAUNDERING SYSTEMS
RICE International Consulting Enterprises Rip G. Rice USA
20 Ozone application for chamois leather making
Dr.Mahalingam College of Engineering and Technology V.Lakshminarayanan India
21 Two tone leathers using Ozone
Dr.Mahalingam College of Engineering and Technology V.Lakshminarayanan India
44 Super-hydrophilization of Stainless Steel Surface by the Combined Use of Gaseous Ozone and Heat
Food & Bio-technology Group, Industrial Technology Center of Okayama Prefecture
Kazuhiro Takahashi Japan
59 Densification of CVD-SiO2 film using high-density ozone treatment
Advanced Technology R&D Center, Mitsubishi Electric Corporation
Kazumasa KAWASE Japan

Sept. 2 (Wednesday) p.m.(9:00-12:05)

Session ［4］ at Room 1
○Municipal Wastewater Treatment （Murakami, Thompson）
Key note speech
111 State of ozonation to municipal wastewater treatment in Japan
Japan Sewage Works Agency Toshikazu Hashimoto Japan
23 Ozone treatment of secondary effluent at US municipal wastewater treatment plants
MWH Americas Michael A. Oneby USA
General presentation
67 The potential use of ozone in municipal waste water
ITT-WWW WEDECO A. Ried Germany
89 Ozonation of municipal secondary effluent
Chemical Engineering Dpt, University of Barcelona B. Domenjoud Spain
137 Treatment efficiency and operational parameter of ozonation of secondary effluent
JOA Hirofumi Takahara Japan
128 Development of Ultra-advanced Sewage Treatment by Compound Oxidation using Advanced Oxidation Process
TAKUMA Co. Ltd. Tomoyuki Doi Japan
32 Demonstration research of micro-bubbling system of ozone for reuse of treated sewage
Hitachi Misaki Sumikura Japan

Session ［5］ at Room 2
○Advanced Oxidation Process （Nakayama, Adams）
Key Note Speech

138 Review and perspective in application of advanced oxidation process
JOA Shigeki Nakayama Japan

General presentation

26 The investigation of ozone/hydrogen peroxide treatment after coagulation and edimentation in drinking water plant
Mitsubishi Electric Corporation N. Yasunaga Japan

29 Simultaneous Control of Bromate Ion and Chlorinous Odor in Drinking Water using Advanced Oxidation Processes（O3/H2O2）
Department of Urban Management, Graduate School of Engineering, Kyoto University
Songkeart Phattarapattamawong Japan

100 O3/H2O2 process for both removal of odors and control of bromate ion formation
Department of Urban and Environmental Engineering, Graduate School of EngineeringKyoto University
Shinya Ohara Japan

68 Advanced Oxidation Process – effective and technical suitable for Micropollutant Removal in contaminated Water Sources
ITT-WEDECO GmbH Dr Achim Ried Germany

40 Diclofenac removal by UV and UVA/O3 processes
Departamento de Ingeniería Química y Química Física.Universidad de Extremadura
Juan F. García-Araya Spain

49 Effects of addition of hydrogen peroxide and/or calcium carbonate on ozone-decomposition of phenol or chlorophenol sparingly dissolved in water
Department of Chemical, Energy and Environmental Engineering Kansai University
Katsuhiko Muroyama Japan

135 A new catalyzed ozone process on water treatment
Applied Catalyst Tech. S.-J. Lin Taiwan

Session ［6］ at Room 3

○Byproducts and Control （Kosaka, Dimitriou）

Key note speech

109 Results of the AWWARF IOA bromateresearch project
Jacobs Engineering Michael Dimitriou USA

139 Ozonation byproducts in Japan Kyoto University Shinya Echigo Japan

General presentation

123 Decomposition of bromate by biological activated carbon
State Key Laboratory of Environmental Aquatic Chemistry, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences
Min Yang China

102 Behaviors of halogenated compounds during pre-chlorine, ozone and post-chlorine treatment
Graduate School of Engineering, Kyoto University Eri Hasegawa Japan

30 An Australian Perspective of Ozone/BAC Process for Reducing Disinfection By-product Precursors in Organics-laden Water
Hunter Water Australia Pty Ltd Yaode Yan Australia

5 Toxicity and Formation of Oxidation Byproducts Generated during Ozonation of Natural Water Containing Pesticide
University of Alberta Pamela Chelme-Ayala Canada

72 Identification of N-nitrosodimethylamine precursors by ozonation from influent of a sewage treatment plant
Department of Water Supply Engineering, National Institute of Public Health
Koji Kosaka Japan

124 Formation of aldehydes formed during ozonation of secondary effluent from a sewage treatment plant and their ecological effect
State Key Laboratory of Environmental Aquatic Chemistry, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences
Min Yang China

Session ［7］ at Room 5

○Ozone Generation （Ito, ）

Key note speech

140 State of the art of ozone generation technologies in Japan
Chiba Institute of Technology Haruo Ito Japan

General presentation

12 The Influence of Adsorbed Gas Layers on the Electrodes on Ozone Yield Efficiency
Power Engineering R&D Center, The Kansai Electric Power Company Inc.
Akira Murai Japan

14 Long Time Operation of An Ozonizer with a Rotating Type Electrode
Saga University, Department of Electrical and Electronic Engineering
Sebastian Gnapowski Japan

11 A Study of the Mechanisms of Composition on the Surface of Nickel in the Ozone Production Using Pure Oxygen
Power Engineering R&D Center, The Kansai Electric Power Company, Inc.
Akira Murai Japan

69 Higher energy efficiency of O3 generation by shorter pulse power
Kumamoto University Sho OKADA Japan

70 Ozone generation using nano seconds pulsed discharge
Kumamoto University Takao MATSUMOTO Japan

84 IGS（Intelligent Gap System）Dielectric Technology for Large-Scale Ozone Generators
Saint Peter’s College Jose L. Lopez USA

Session ［Medical ］ at Room 4

Session Medical 1 Pharmacological Aspects of Medical Ozone: Reaction Mechanism, Mechanisms of Action, Biological Models, Animal and Cell Models. （VIEBHAN-HAENSLER Renate）

Keynote Lecture
Low-Dose Medical Ozone as a Bioregulater. "Ozone Peroxide"as Second Messenger Molecule?
VIEBHAN-HAENSLER Renate

Ozone Oxidative Postconditioning efficacy on the Prolapse and Protrution Phases in Patients with Hernia Disc
FEMANDEZ Olga Sonia León [(1)], Marelis Pantoja, Luis Ledesma, Renate Viebhan, Lamberto Re, Silvia Menéndez, José L. Calunga

Effect of Ozone Oxidative Preconditioning on Oxidant Status of Adjuvant Arthritic Rats
MAWSOUF M.Nabil. , Maha.M. El-Sawalhi , Hebatalla A. Darwish and Amira A. Shaheen

Ozone Therapy for Dogs and Cats
SHIMIZU Nashiku , Noriko Shimizu, Makoto Washizu

Understanding the Molecular Actions of Ozone. Ozone in Medicinal Research
OLIVER Douglas W., C.B. Brink, D.P. Venter, B.P.J. van Niekerk, A. Pretorius and J. Lotriet

Ozone Oxidative Postconditioning in Acute Renal Failure
MENENDEZ Silvia , José Luis Calunga, Zullyt Zamora, Nelson Merino, Teresa Montero and Yaima Alonso

Sept. 2（Wednesday） p.m(13:30-18:30)

Session ［8］ at Room 1

○Municipal Wastewater Treatment （Murakami, Thompson）

General presentation

75 Ozone application during APT coagulation of wastewater: Effects on Dissolved Organic Matter
Instituto de Ingeniería, UNAM M.T. Orta de Velásquez Mexico

10 The Study on the Ceramic Membrane Wastewater Reuse System with Pre Ozonation and Coagulation
Metawater ,Co., LTD. M. Noguchi Japan

78 COAGULATION – FLOCCULATION AND OZONATION OF MUNICIPAL WASTEWATERS FOR REUSE IN AGRICULTURAL IRRIGATION.

Ozone Research Center. Nacional Center of Scientific Research Eliet Véliz Lorenzo Cuba
118 The Enhancement of Permeation Efficiency in Ceramic Membrane Bio-reactor by Ozone
Environmental Research and Management Center, Hiroshima University T.-Y. Tsai Japan
120 Treated Water Quality Enhancements from Ozonation/Biologically Active Filtration in a Tertiary Plant Upgrade
Melbourne Water Corporation John Mieog Australia
125 Treatment Characteristics of Wastewater Containing Phenol and Reaction Mechanism by Ozone-Added Activated Sludge Process
Dept. of Urban and Environmental Engineering, Kyoto University
Fumitake NISHIMURA Japan
81 Updating an Existing Wastewater Ozonation System with Generators and Sidestream Injection
Black & Veatch Jeff Neemann USA
108 Application examples of ozonation for reuse of treated sewage in Tokyo
Sewage Works Bureau of Tokyo Yoshitake Yoda Japan
126 Installation and operation of full-scale ozonation facility to sewage treatment plants in Kyoto City
Director , Fushimi Wastewater Treatment Plant Water and Sewage Works Bureau of Kyoto City
Haruki Mizutani Japan
141 Super advanced treatment with ozone and BAC in Lake Biwa basin-wide Sewage system
Shiga Prefecture S.Nishimura Japan
Poster presentation
142 Reuse of treated sewage by application of ozone in Yokohama City
Yokohama City Japan

Session ［9］ at Room 2
○Advanced oxidation process （Nakayama, Adams）
General presentation
51 THE ADVANCED OXIDATION PROCESSES WITH OZONE, OZONE-UV, AND OZONE-UV.H2O2 AN ALTERNATIVE FOR TREATMENT OF 2,5-DICHLOROPHENOL.
Universidad Autónoma Metropolitana – Azcapotzalco Ramírez-Cortina Clementina R. Mexico
52 PHYTOTOXICITY OF INTERMEDIATE COMPOUNDS OF PHENOL OXIDATION WITH OZONE AND OZONE-UV
Universidad Autónoma Metropolitana-Azcapotzalco Ramírez-Cortina Clementina R. Mexico
71 Water Trearment System Using discharge in Water Cavitation
Department of Electrical and Electronic Engineering, Faculty of Science and Engineering, Saga University
Satoshi Ihara Japan

105 Effect of ozone-gas bubble size and pH on ozone/UV treatment
Faculty of Science and Technology, Ryukoku University
Naoyuki Kishimoto Japan
117 Decomposition of 1,4-dioxane by ozone and advanced oxidation process
Sumitomo Precision Shinya Tasaka Japan

Session ［10］ at Room 2
○Agriculture-food-beverage application (naitou)
General presentation
36 OZONATION OF IMIDACLOPRID AND BITERTANOL: REACTION MONITORING AND EFFECTS ON CYTOTOXICITY
Université de Toulouse Bourgin M France
37 DEGRADATION OF DEOXYNIVALENOL BY OZONATION TREATEMENT: BY-PRODUCT AND GENOTOXICITY CHARACTERIZATION
Université de Toulouse Violleau F. France
50 Removal of Odorous Compound on Rubber Seals using Ozone in Beverage Industries
Environmental Research and Management Center, Hiroshima University Tetsuji Okuda Japan
28 Ozone Inactivation of food spoilage acid-producing bacteria
Aichi Gakusen college SIGEZO NAITO Japan

Session ［11］ at Room 3
○Industrial Application （Kuzumoto, Nishijima, Lezmik, Liechti）

General presentation

80 Application of Ozone and Hydrogen Peroxide（O3 + H2O2）AOP（Advanced Oxidation Process）Treatment to Modify the Surface Characteristics of Single-Walled Carbon Nanotubes（SWNTs）
R&D Institute of KOLON EFMC Hyung-Nam Lim Korea

62 Fundamental Studies on Effect of Ozone Injection to the Internal Combustion Engine – Chemical changes of Hydrocarbon Compounds by Ozone Injection –
Sasebo National College of Technology Y. Yagyu Japan

65 ACID LEACHING OF CHALCOPYRITE WITH OZONE AND FERRIC IONS: TAGUCHI EXPERIMENT AND STATISCAL ANALYSIS
Facultad de Metalurgia - Universidad Autónoma de Coahuila
F. R. Carrillo-Pedroza Mexico

76 Structural characterization by Nuclear Magnetic Resonance of ozonized triolein
Department of Ozonized Substances, Ozone Research Center, National Center for Scientific Research
Maritza F. Díaz Cuba

104 Development of Treatment Technique for Corrosion Inhibitor in Liquid Waste from Nuclear Power Plant Using Ozone
Toshiba Yuki YAHIRO Japan

57 Effect and optimization of CO2 partial pressure during ozone water production
Nomura Micro Science Co.,Ltd. Takahiro Yonehara Japan

93 Measurement of dissolved ozone concentration with multi-component continuous water analyzer
Ebara Jitsugyo Co.,Ltd. Yoshio Sato Japan

133 Ozone Measurement Based on optical Absorption Using a Visible LED Source
The Univ. of Tokushima F. Fukawa Japan

94 Simple ozone-leak monitor with ultra-violet absorbance system
Ebara Jitsugyo Co.,Ltd. Nobuyuki Kisaki Japan

110 Measurement of ozone concentration distribution around small air deodorizer using developed ozone detection ribbon
NTT Energy and Environment System Labs. Yasuko Y. Maruo Japan

Session ［12］ at Room 5

○Ozone Generation （Ito, ）

General presentation

95 Studies on Discharges Mechanism of Micro-plasma Ozonizer Operated in Water
University of Miyazaki Tatsuya Sakoda Japan

103 Fundamental Study of Barrier Discharge and Ozone Generation Characteristics for Multiple Needles to Plane Configuration
Electrical Engineering and Computer Sciences, University of Hyogo Hideki Ueno Japan

115 Miniaturized ozone generator for deodorization using ferroelectric LiTaO3 crystal
Doshisha University Yoshikazu Nakanishi Japan

116 Reduction of Nox on Air-Fed Ozonizers Using Ferroelectric Packed-bed plasma Reactor
Department of Electrical and Electronic Engineering, Musashi Institute of Technology
Yoshiyasu Ehara Japan

131 Effect dielectric electrode material on ozone generation in piezoelectric transformer-based ozone generator
The Univ. of Tokushima K.Teranishi Japan

132 Consideration on configuration of parallel reactors for ozone production using nanosecond pulsed power discharge
The Univ. of Tokushima Fumiaki Fukawa Japan

Poster presentation

27 An Ozone-zero Phenomena in Pure Oxygen in Ozone Generation
Saga Univ. C.Yamabe Japan

Session ［13］ at Room 5

○Ozone Solubilization and Decomposition （Mizuno）

Key note speech

143 Absorption and decomposition characteristics of high concentration ozone
Kyoto University Tadao Mizuno Japan

General presentation
31 Model Development of Ozone Decomposition: Validation Using Pure Compounds as Initiator, Promoter and Inhibitor
Division of Environmental Science and Engineering, Faculty of Engineering, National University of Singapore
E.L. Yong Singapore
106 Decomposition behavior of dissolved ozone in high temperature solution for decontamination of Reactor Pressure Vessel in a Nuclear Power Plant
TOSHIBA Corporation Yumi YAITA Japan
45 Mass Transfer and Reaction Characteristics of Pressurized Non-Bubble Ozone Contactor
Graduate School of Engineering, Kyoto University Shota Furusawa Japan
113 Study on ozone absorption characteristics in ultraviolet rays / ozone reactor.
Kubota Corp. Kodai Yoshizaki

Session ［Medical］ at Room 4

Session Medical 2 Clinical Reports and Treatment Strategies: Angiopathia, Diabetes and Chronic Inflammatory Diseases

Keynote Lecture
The intensive Care of Lower Limb Diabetic Wounds: our 10 Years Experience in PatientsTtreated Topically with Ozone as Adjunctive Agent.
CALDERON Noam, Teddy Kaufman, Leonid Bryzgalin, Munir Awad
Adjuvant HBO and Ozone in Diabetic Foot & Badly Healing Wounds
MAWSOUF M. Nabil[1)], FATHI Ahmed M[2)].,

Session Medical 3 Clinical Reports and Treatment Strategies: Virus Cased Diseases and Complementary Oncology

Keynote Lecture
Ozone Therapy in Cancer Treatment . State of the Art
MENENDEZ Silvia

Practical Session

Sept. 3（Thursday）a.m.(9:00-12:05)

Session ［14］ at Room 1
○Sludge Treatment （Yasui, Liechti）
Key note speech
4 Power production from municipal sludge using improved anaerobic digestion system
The university of Kitakyuusyuu Hidenari Yasui Japan
General presentation
3 Reduction of sewage sludge and recovery of phosphorus by the ozonation/cavitation method
Aqua Research Center, The University of Kitakyushu Seiichi Ishikawa Japan
7 Evaluation of Multistage Anaerobic Digestion Systems combining Ozonation, Mesophilic Digestion and Thermophilic Digestion
Dept. of Civil and Environmental Engineering, Tohoku University
Takuro KOBAYASHI Japan
98 Ecological Treatment System for River Sludge Sediments using Air & Ozone Bubbling
Institute of Technology, Shimizu Corporation
Sumio Horiuchi Japan
99 OZONE POST TREATMENT OF SOLID WASTES
National Center for Scientific Researcher Matilde López Torres Cuba
144 Verification of sludge reduction by ozonation with phosphorus recovery conducted at the demonstration

plant Ebara Corporation Kiyomi Arakawa Japan

129 Performance of sludge disintegration process by ozonation installed in full-scale municipal WWTPs in Japan
Research and Technology Development Division Japan Swage Works Agency
Kentaro Mizuta Japan

Poster presentation
134 *Actinomyces* Scum Control-Technology for correcting treatment problems by ozone addition
Kawasaki City Takashi Okochi Japan

Session ［15］ at Room 2
○Air and Gas Treatment （Sugimitsu）
General presentation
90 Cooking exhaust deodorization of food processing factory & restaurant with Water Mist & Ozone
Keihin Sangyo Co. Ltd Noriyoshi Kosaka Japan
114 Effect of Different Combination of Metal and Zeolite on Ozone Assisted Catalysis for VOC Removal
National Institute of Advanced Industrial Science and Technology（AIST）
Masami Sugasawa Japan
42 VOC removal in a compact wet scrubber using advanced oxidation process
Anjou Recherche-Veolia Environnement, Chemin de la Digue;Ecole Nationale Supérieure de Chimie de Rennes;Université européenne de Bretagne
P.-F. Biard France
33 Decomposition of Benzene, MTBE and Toluene in Gas Phase by Ozone
Superior School of Chemical Engineering of National Polytechnic Institute
M. Franco Mexico
18 Removing Nox Process Having Water Absorption Filter and Effect of Ozone Oxidation
Tada Electric co. LTD Shiro Yamauchi Japan
107 Catalytic Decomposition of Unwanted Ozone under Ambient Conditions
Carus Corporation Ken Pisarczyk

Session ［16］ at Room 3
○Industrial Wastewater Treatment （Takahashi, Tuyen）
Key note speech
85 Ozonation of dye stuffs and intermediates and further decrease in dissolved organic carbon by post-biogegradation National Institute of AIST Nobuyuki Takahashi Japan
General presentation
6 Effect of the Additives on the Degradation of Dyes in Aqueous Solution by Single Ozonation
Superior School of Chemical Engineering of National Polytechnic Institute
A. Pérez Mexico
86 The experimental results of dyeing wastewater treatment by ozonation and biological method
Institute of Environmental Technology（IET）Vietnamese academy of science and technology（VAST）
Trinh Van Tuyen Vietnam
47 Dyeing Wastewater Treatment Using Charcoal Made of Vietnamese Bamboo Waste
ACER, Meisei Univ., Tokyo;Dept. of Environmental Sys., Meisei Univ., Tokyo
S. Yoshizawa Japan
74 MELANOIDINS OZONATION FOR COLOR REMOVAL AND ANAEROBIC BIODEGRADABILITY ENHANCEMENT
INRA, UR 50, Laboratoire de Biotechnologie de l’ Environnement
BATTIMELLI Audrey France
64 CYANIDE REMOVAL FROM AQUEOUS SOLUTIONS BY COMBINED EFFECT OF OZONE AND ACTIVATED CARBON
CIEP, Facultad de Ciencias Químicas, Universidad Autónoma de San Luis Potosi
F. Fraga-Tovar Mexico
55 OXIDATION OF PETROLEUM REFINERY WASTEWATER CONTAINING PHENOLIC COMPOUNDS
Facultad de Química, Universidad Nacional Autónoma de México,

Lazcano-Arriola Luz Maria Mexico

Session ［Medical ］ at Room 4

Session Medical 3 Clinical Reports and Treatment Strategies: Virus Cased Diseases and Complementary Oncology

Anti-tumor Effect of Ozone Water
OKAMOTO Yoshiharu[1)], Takuro Mori[1)], Takeshi Tsuka[1)], Masahiiko Sugiyama[1)], Saburo Minami[1)], Toru Kitamura[2)], Harunari Okamoto[3)]

Intratumoral Ozone Therapy - An Important Step in Improving the Control of Tumor Growing
SCHUPPERT, A .

Ozone Therapy in Patients with Viral Hepatitis "*C*". Ten Years Experience
MAWSOUF M. Nabil[1)] and T. Tanbouli[2)]

Efficacy of Ozone Therapy for Postherpetic Neuralgia (PHN)
TOKUYAMA Hirobumi [1)]、Chikaaki Kusaka[2)],Tsutae NAGATA[2)], Nariko Shinriki[3)],

Clinical Comparative Study of Ozone Therapy and Guideline Therapy in Pressure Ulcer
UEMURA S., T.Ichihara, A.Watanabe, K.Nakahara, T.Yoshimi, J.Uemura

Ozonated Olive Oil Enhances the Growth of Granulation Tissue in a Mouse Model of Pressure Ulcer
SAKAZAKI Fumitoshi [1)], Hiromi Kataoka[2)], Masanori Senma[2)],Tomofumi Okuno[1)], Hitoshi Ueno[1)], Katsuhiko Nakamuro[1)]

Components and Anti-inflammatory Action Mechanism of Ozonized Olive Oil
MIURA Toshiaki [1)], Atsushi Iwai[1)], Koichi Tamoto[2)], Akinori Yamazaki[2)], Hiromi Nochi[2)]

Sept. 3（Thursday） p.m.(13:30- 18:30)

Session ［1］ at Room 1
○Water Purification （Funamizu, Dimitriou, ）
Key note speech
1 Operating Experience with Drinking Water Ozonation in North America
Process Application, Inc. Kerwin L. Rakness USA
General presentation
34 Evaluation of the raw and process water in the purification plant by Fluorescent Intensity
Ochanomizu University Nobuyuki Kaiga Japan
96 Multi-function Sidestream Ozone Treatment at a Drinking Water Treatment Plant
Dessau Inc. Maxime Beaulieu Canada
92 The reactive art of Quenching Ozonated Water
Metropolitan Water District of Salt Lake & Sandy Gardner Olson USA
136 Appropriate ozonation system in water purification plant
JOA Hirofumi Takahara Japan
25 Application and operation of high-efficiency ozonation system in combination of pure-oxygen ozonizer and U-tube reactor
Hanshin Water Works Agency Kazuo Ogura Japan
82 Design of a 2,900 MGD Ozonation System For Taste and Odor Control in Texas
Black & Veatch Jeff Neemann USA
91 Application of an advanced water purification（ozonation） system at Murayama Water Purification Plant in Tokyo

Bureau of Waterworks Tokyo Metropolitan Government Hiroshi Yamada Japan

Session ［18］ at Room 2

○Disinfection （Otaki）

Key note speech

119 Ozone Inactivation of viruses- More to it than CT alone
Melbourne Water Corporation Clare McAuliffe Australia

General presentation

54 WATER DISINFECTION OPTIMISATION: AN ANALYTICAL MODEL TO DETERMINE HYDRAULIC EFFICIENCY OF OZONE CONTACTORS
Veolia Water Technical Department Yves Jaeger France

13 Disinfection and removal of biofilms using ozone in combination with hydrogen peroxide
College of Pharmacy, Nihon University Mariko Tachikawa Japan

41 QUANTIFICATION OF THE BACTERICIDAL, FUNGICIDAL, AND SPORICIDAL EFFICACY OF THE JLA LTD OZONE LAUNDERING SYSTEM
MGS Laboratories, Science Centre Kyle Allison UK

79 OZONE APPLICATION FOR POSTHARVEST DISINFECTION OF TOMATOES
Centro de Investigaciones del Ozono, Centro Nacional de Investigaciones Científicas
Mayra Bataller Cuba

66 Treatment of antibiotics and antibiotic resistant bacteria in manure and water with ozonation process
Bogazici University Institute of Environmental Sciences Bebek
Isil Akmehmet Balcioglu Turkey

83 Disinfection of Pure Water by means of Direct Ozonation Using Membrel® System
Degrémont Technologies Ltd Dr. Fabio Krogh Switzerland

Session ［19］ at Room 3

○Industrial Wastewater Treatment （Takahashi, Tuyen）

General presentation

53 PHENOL OXIDATION WITH OZONE AND OZONE-UV-H2O2
Universidad Autónoma Metropolitana – Azcapotzalco
Ramírez-Cortina Clementina R Mexico

43 OZONE OXIDATION OF STRIPPED SOUR WATER FROM A MEXICAN REFINERY
Facultad de Química, Universidad Nacional Autónoma de México
Gutiérrez-Lara Ma. Rafaela Mexico

112 Application of Advanced Wastewater Treatment Techniques To The Low Type Grease-Interceptor
OPPC T.Kurata

63 A Feasibility Study on the Catalytic Ozonation Using Modified Aluminum-Coagulated Sludge as a Heterogeneous Catalyst in Wastewater Oxidation Treatment
Department of Environmental Engineering and Science, Feng Chia University
J.J. Wu Taiwan

77 Landfill leachates treatment by coagulation-flocculation-ozonation process.
Ozone Research Center. National Center of Scientific Research
L. A. Fernández Cuba

97 Mitigating Environmental Impact Of Gold Mine Wastewater Cyanide Through Ozone Oxidation
1. Mazzei Injector Company
James R Jackson USA

Session ［Medical］ at Room 4

Session Medical 4 Clinical Reports and Treatment Strategies: Ozone in Pain Management, Intraarticular and Intradiscal Injections, Triggerpoints, Rheumatology

Keynote Lecture
Ozone Therapy for Fibromyalgia Syndrome (FMS) and Spinal Canal Stenosis
NAGATA Tsutae,

Keynote Lecture
Fibromyalgia - A Controlled Clinical Study with Ozone vs Local Anestetic
FAHMY, Z,

Keynote Lecture

Final Results of Combined Intradiscal and Periganglionic Injection of Medical Ozone and Periganglionic Administration of Steroids and Anesthetic for the Treatment of Lumbar Disk Herniation: Effects on Disk Size and Lumbar Radiiculopathy.
LEHNERT, Th., M.G. Mack, T.J. Vogl

Ozone Therapy: A Clinical Study on Pain Management
RE L, G. Martinez-Sanchez, G. Malcangi, A.Mercanti i V.Labate i

Treatment of Lumbodinya and Sciatica with Ozone Therapy
ALEJANDRO Ortiz , Alcantara-Canseco Cesar

Postoperative Pain Relief by Ozone Therapy in Patients Undergone Hemorrhoidectomy
GOTOH Hiroshi

Development of Small-sized Generator of Ozone-dissolved Water Using Boron Doped Diamond Electrodes
NISHIKI Y., N. Kitaori, K. Nakamuro, and M. Tanaka,

Discussion

Summarizing the whole meeting by Renate Viebahn

Closing