



AOP



ozonía

ADVANCED OXIDATION PROCESSES

APPLICATIONS

BE RADICAL... FOR THE ENVIRONMENT

Prospect of a sustainable water management

Water is a unique resource that cannot be substituted by alternatives, it requires care and conservation. Unfortunately, from the deterioration of our natural water reserves to its intensive use for industrial purposes, water is subject to ever increasing pressures that affect its quality and the equilibrium of our ecosystem. For over 20 years Ozonia has been improving water quality by developing ultra-efficient “green” technologies for all applications involving oxidation and disinfection processes.

Advanced Oxidation Processes (AOP)

State-of-the-art AOP systems developed by Ozonia use or combine three proven treatment technologies (Ozone, UV, Hydrogen Peroxide) to create hydroxyl radicals, the ultimate oxidant for elimination of organic pollutants.

AOP combinations provided by Ozonia include:

- O_3
- O_3 / UV
- O_3 / H_2O_2
- UV / H_2O_2
- UV / O_3 / H_2O_2

MUNICIPAL & INDUSTRIAL WATER MANAGEMENT

Limit the pollution discharge into the environment

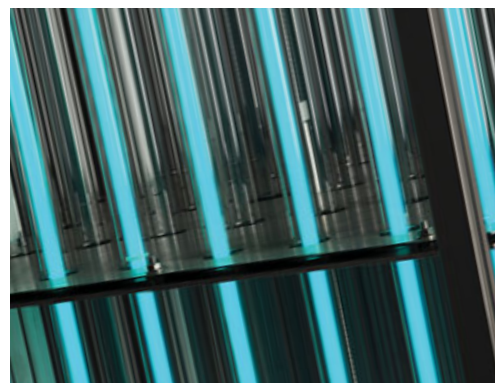
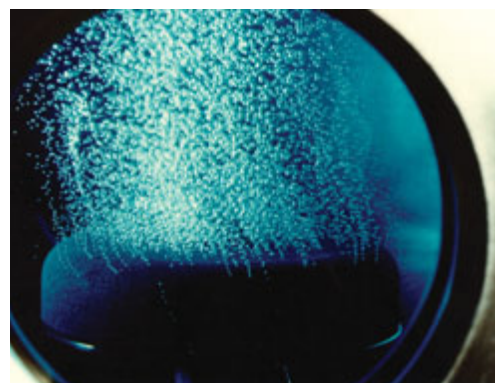
Due to industrial and demographic pressures, the use of AOP's in water treatment is expanding for a number of critical uses including the oxidation or removal of:

- Industrial chemicals
- Pharmaceuticals
- Endocrine Disrupting Compounds (EDC's)
- Personal Care Products (PCP's)
- Pesticides
- Toxic compounds
- Odor, color and taste
- Pathogens
- Persistent organic matter

Urban waste waters are increasingly contaminated with organic substances such as biocides, endocrine disruptors (EDC's), personal care products (PCP's), pharmaceutical products, fuel additives, and other emerging contaminants. These contaminants are known threat for aquatic ecosystems and human health and have become a major issue for water utilities around the world.

Current treatment practices in existing waste water plants struggle to eliminate these pollutants and meet current and future regulations. AOPs, thanks to their high oxidation potentials, have proved to be the most efficient solution for the removal of these persistent organics

THE ULTIMATE SOLUTION FOR POLLUTANTS REMOVAL



EXPERTISE

Leader in oxidation technologies

With more than 20 years of experience in the development of ozone and UV technologies, Ozonia is the global leader in the application of oxidation alternatives. Ozonia designs and manufactures the widest range of Ultraviolet, Ozone and AOP systems incorporating the most sophisticated electronics and lamp technologies available, to develop tailored solutions meeting the needs of the industrial and municipal markets.

Client Partnership

Ozonia's experts will help you to define the optimal solution for the treatment of complex multi-polluted waters.

In partnership with clients, Ozonia applies its knowledge in the field of disinfection and oxidation processes to achieve the best overall answer to meet your treatment requirements safely and economically. Ozonia maintains extensive laboratory resources in Europe and North America as well as mobile AOP pilot plants for on-site testing. Ozonia is in a position to demonstrate the advantages of clean oxidation technologies.

HOW DOES IT WORK?

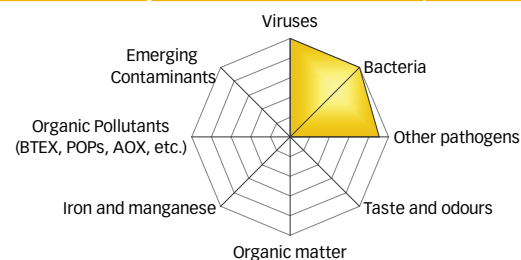
Generation of Hydroxyl Radicals

AOP are aqueous phase oxidation methods consisting of highly reactive species used in the oxidative destruction of target pollutants. AOP creates a more powerful and less selective secondary oxidant, hydroxyl radicals, in the water.

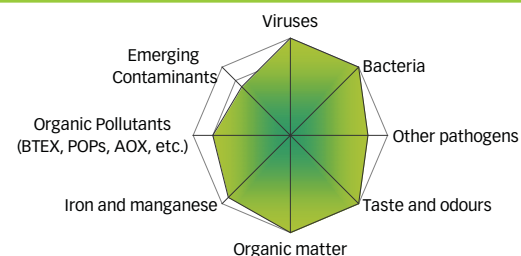
This secondary oxidant can cause the oxidation of most organic compounds until they are fully mineralized as carbon dioxide and water. The hydroxyl radical has a much higher oxidation potential than ozone or hydrogen peroxide and usually reacts at least one million times faster, thus leading to a smaller contact time and footprint.

"THE MOST POWERFUL OXIDANT"

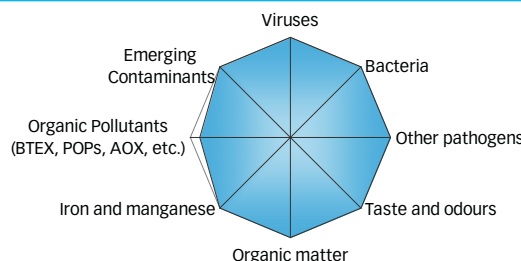
UV



OZONE



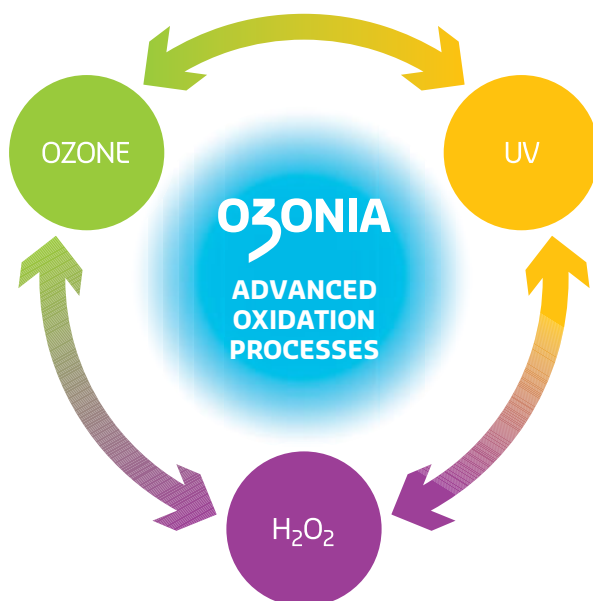
AOP



TARGET POLLUTANTS

- > 1,4 Dioxane
- > MTBE
- > NDMA
- > Atrazine
- > Diuron
- > Diclofenac
- > Carbamazepine
- > Ibuprofene
- > Hormones
- > Geosmin
- > MIB
- > ...

“Complex Problems Require Radical Solutions”



CONTACTS: www.ozonia.com

OZONIA

Stettbachstrasse 1
8600 Dübendorf Switzerland
Tel: +41 44 801 85 11, Fax: +41 44 801 85 01
info-ozoniaCH@degtec.com

OZONIA France

Tour CB21 - 16 Place de l'Iris
92040 Paris La Defense - France
Tel: +33 1 58 81 50 69, Fax: +33 1 58 81 57 18
info-ozoniaFR@degtec.com

OZONIA United Kingdom - Triogen

Unit 14 Langlands Place
East Kilbride G75 0YF, UK
Tel: +44 13 55 220 598, Fax: +44 13 55 570 058
info@triogen.com

OZONIA Russia

40, Varvaskaya St.
603006 Nizhny Novogorod, Russia
Tel: +7 831 434 16 28, Fax: +7 831 434 25 89
info-ozoniaRU@degtec.com

OZONIA North America

600 Willow Tree Rd.
Leon, NJ 07605 USA
Tel: +1 201 676 2525, Fax: +1 201 346 5460
info-ozonia@degtec.com

OZONIA China

9F, Jing Guang Office Building Hu Jia Lou Chaoyang District
100020 Beijing - China
Tel: +86 10 5957 7206, Fax: +86 10 6597 3660
info-china@degtec.com

OZONIA Japan

2-21, Mita 3-chome, Minato-ku
Tokyo 108-0073 Japan
Tel: +81 3 5444 6361, Fax: +81 3 5444 0851
info-japan@degtec.com

OZONIA Korea

Yatap Leaders B/D 2F(211#)
342-1, Yatap-Dong
Bundang-Gu, Seongnam City
Gyeonggi-Do, South Korea
Tel: +82 31 701 90 36, Fax: +82 31 701 40 28
info-ozoniakR@degtec.com

Your local distributor:

