



Ozone-based solutions to fight pathogens and related epidemics

The International Ozone Association, European African, Asian, Australasian Group, invites professionals, academics, and students to participate the Webinar

Ozone inactivation of SARS-CoV-2 and other viruses.

As humanity faces COVID-19, a major public health crisis, this first webinar will share with all interested the potentialities of ozone application to fight the pandemic. The presentation will cover the basics of ozone disinfection, benefits and critical points, lessons learned from background applications, and the current challenges faced by the scientific community.

Register for this webinar	
TYPE	Webinar
DURATION	90 min
START DATE	8 July 2021
START TIME	14:00 (Paris time)
LANGUAGE	English
FORMAT	Presentation, Q&A panel

Description

COVID-19 pandemic has boosted the applications of ozone for disinfection in different areas (water, indoor air, cleaning surfaces...). Researches on effects of ozone application on viruses have been performed for several decades: efficiency assessment, mechanisms of inactivation, application conditions. Published works are quite abundant and recent overviews have been published particularly in Ozone Science & Engineering Journal, but nevertheless little information is available on SARS-CoV-2.

The presentation will provide a general overview on fundamentals and practical considerations for the best use of ozone for inactivating viruses and particularly Sars-CoV-2 by covering:

1. Theoretical considerations on viruses, their biological constituents, the mechanisms of host cell infection. A special attention will be brought for practical considerations to the relations between the different sites of virus inactivation (protein leakages, RNA modification, lipid layers oxidation) and the responses to the different tests (Q-PCR, infectivity level...).
2. Ozone and other related oxidant species reactivity towards the different biological material and how oxidation and virus inactivation are possible. The importance of the environment of the viruses is studied: aggregated viruses or not, virus associated to host cell debris, saliva proteins content...
3. Concerning ozone application: matrix impact, pH effects on ozone/hydroxyl radical ratio, occurrence of hydroxyl radical promoters and scavengers, key-process parameters will be discussed.
4. Summary and comparison of the different performances of ozone and other oxidants (UV, chlorine...) towards different viruses (Poliovirus, SARS-CoV-2...) and other microorganisms.

Speaker

Jean-Pierre Duguet obtained his Ph.D in 1981 on wastewaters ozonation from the National Institute of Applied Sciences, INSA of Toulouse, France. In 1982, he joined the Research Center of Lyonnaise des Eaux, Suez (CIRSEE), as Research Engineer and was then in charge of water quality and treatment at the technical direction of Lyonnaise des Eaux. In 2000 he moved to Eau de Paris as deputy manager of the water quality and treatment department. During his entire career, he was involved in research and development of application of ozone and other disinfectants in drinking water as well as in management of the International Ozone Association. He is Past President of the EA₃ Group, editorial board member of Ozone: Science & Engineering.

Registration category and fees in € (EUR)	Rate	Rate
IOA Member* - Live webinar and Access to replay video	30 €	IOA Member* - Access to replay video only
Non-member** - Live webinar and Access to replay video	40 €	Non-member** - Access to replay video only
Student*** - Live webinar and Access to replay video		0 €
New IOA annual membership subscription + Webinar registration		190 €

*The membership status will be checked. If wrong, the registration will have to be changed.

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