

26-27 October 2021

Bilbao, Spain

Olores.org



2021

**9th IWA Odour
& VOC/Air Emission
Conference**



ODOURS IN THE ENVIRONMENT

What are odours? How are they measured? How are they controlled? How are they regulated? These and many other issues will be addressed in the *9th Odour & VOC/Air Emission Conference of the International Water Association (IWA)* that will be held this time in Bilbao (Spain), on 26 and 27 October 2021.

The IWA Odour and Air Emissions Conferences is one of the worldwide leading odour conferences. This conference will be organized for the first time by Olores.org, that has already organized 5 International Odour conferences. The last conference held by Olores.org in Santiago de Chile in 2019, hosted 180 participants from 17 different countries.

The programme for this conference focuses on analysing current issues and developments in the field of odour management and VOCs/Air Emissions. The objective for this International Conference on "Odours in the Environment" is to bring together all professionals with experience in the management, measurement and control of odours, VOCs and air emissions.

At present, there are many silos within this industry. This international conference hopes to enable the transfer of knowledge as well as provide an international platform for sharing ideas and current mechanisms, ultimately creating a more holistic approach to management. A number of specialists are participating in this year's event. Some such participants include; scientists, researchers, consultancies, public administration, plant managers, industries, etc.

Olores.org eagerly awaits and welcomes your questions and contributions, and from the Organizing Committee, we hope that this conference will be a success for everyone.

On behalf of the organizing committee, we would like to thank you for your participation at the conference and for helping us raise awareness about the importance of odour management,

Carlos Nietzsche Díaz

Olores.org

Olores.org team: Carlos Nietzsche Díaz, Cyntia Izquierdo, Ainhoa Antón, Rebecca Kavanagh, Nerea Mollinedo, Isidro Gil, Zuzana Bienska, Maximilian Palffy.



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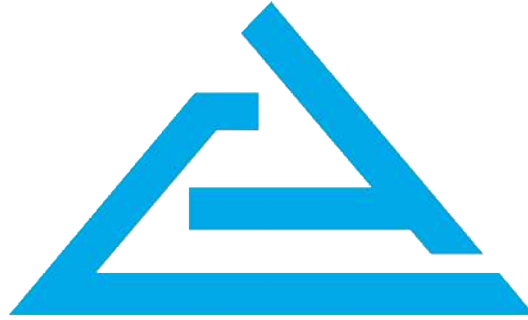
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CONFERENCE CENTRE

This will be the first IWA Odour Conference held in Bilbao in this series. The Euskalduna Conference Centre is located in the next to the Estuary in the centre of Bilbao, the largest city in the Basque Country.



The event will be held on the 0 floor, accessing the building as seen below. On the room 0E the oral presentations will be displayed, and the exhibition area on the hall II.



INAUGURATION

We invite you to attend the inauguration on the 26th October, from 9:00 to 9:15, so please, remember to come earlier (at 8:30) in order to pick up your badge.

Inauguration & Welcome

- 9:00** D. Carlos Nietzsche Díaz, organizer and president of AMIGO
- 9:05** D. Javier Aguirre Orcajo, Director of Environmental Quality and Circular Economy, Basque Government
- 9:10** D. Fernando Morcillo, President of AEAS (Spanish Water Supply and Sanitation Association)
- 9:15** D. Asier López Etxebarria, Sudirector of sewage operation of Consorcio de Aguas Bilbao-Bizkaia



PROGRAMME

Day 1 – 26th October 2021

8:30 Registration

9:00 Inauguration & Welcome

9:15 Keynote speakers

Session about Policy

9:45 **LIMIT VALUES FOR ODOUR IN AMBIENT AIR – A LEGAL SYSTEM APPLIED ALL OVER GERMANY** (EN)

Ralf Both*, Kathrin Kwiatkowski

North Rhine Westphalian State Agency for Nature, Environment and Consumer Protection, Germany

10:00 **OVERVIEW ODOUR LEGISLATION AROUND THE WORLD** (EN)

Anna Bokowa^{1*}, Carlos Diaz², Jacek A. Koziel³, Michael McGinley⁴, Jennifer Barclay⁵, Günther Schauburger⁶, Jean-Michel Guillot⁷, Robert Sneath⁸, Laura Capelli⁹, Vania Zorich¹⁰, Cyntia Izquierdo², Ilse Bilsen¹¹, Anne-Claude Romain¹², Maria del Carmen Cabeza¹³, Dezhao Liu¹⁴, Ralf Both¹⁵, Hugo Van Belois¹⁶, Takaya Higuchi¹⁷, Landon Wahe³

1. EOC Environmental Odour Consulting Corp., Oakville, ON, Canada.

2. Ambiente et Odora SL, Bilbao, Spain.

3. Iowa State University, Department of Agricultural and Biosystems Engineering, Iowa, USA.

4. St. Croix Sensory Inc., Stillwater, MN, USA.

5. Atmospheric Science Global Ltd, Auckland, New Zealand.

6. WG Environmental Health, Unit for Physiology and Biophysics, University of Veterinary Medicine, Vienna, Austria.

7. IMT Mines Alès, LGEI, Alès Cedex, France.

8. Silsoe Odours Ltd., Silsoe, Bedford, Bedfordshire, UK.

9. Politecnico di Milano, Dipartimento CMIC "Giulio Natta," Milano, Italy.

10. The Synergy Group, Ecometrika, Santiago, Chile.

11. VITO, Flemish Institute for Technological Research, Mol, Belgium.

12. University of Liege, Arlon, Belgium.

13. Ministerio de Ambiente y Desarrollo Sostenible – Dirección de Asuntos Ambientales Sectorial y Urbana, Colombia.

14. Zhejiang University, College of Biosystems Engineering and Food Science, Hangzhou, China.

15. North Rhine - Westphalia State Agency for Nature, Environment and Consumer Protection, Essen, Germany.

16. Van Belois Environmental Services, Arnhem, the Netherlands.

17. Graduate School of Sciences and Technology for Innovation, Yamaguchi University, Yamaguchi, Japan.

10:15 **BUT, HOW MUCH DOES THE IMPACT OF ODOUR COST?** (EN)

Ainhoa Antón, Cyntia Izquierdo, Rebecca Kavanagh*, Carlos Nietzsche Díaz

Ambiente et Odora SL, Bilbao, Spain

10:30 **LESSONS LEARNED IN THE ELABORATION OF THE FIRST ODOUR**

REGULATION IN CHILE (EN)

Daniela Caimanque

Environmental Ministry of Chile, Santiago, Chile

10:45 DETERMINATION OF HEDONIC ODOUR EFFECT BASED ON POLARITY PROFILES (EN)

Kathrin Kwiatkowski*, Ralf Both

North Rhine Westphalian State Agency for Nature, Environment and Consumer Protection, Germany.

11:00 Break (Coffee)

Session about Citizen Science

11:45 CITIZEN SCIENCE FOR ODOUR IMPACT ASSESSMENT: THE BARCELONA CASE STUDY OF D-NOSES (EN)

Rosa Arias*, Nora Salas Seoane, Johana Burbano, Miguel Hernández

Science for change, Barcelona, Spain

12:00 STANDARDISATION OF CITIZEN SCIENCE METHODOLOGIES ON ODOUR OBSERVATIONS (ES)

Jose Manuel Felisi^{1*}, Edgar Lorenzo-Sáez², Victoria Lerma-Arce²

1. G-AGUA. València (Spain)

2. Instituto ITACA. Universitat Politècnica de València (Spain).

12:15 THE ITALIAN PILOT FOR THE HORIZON 2020 D-NOSES PROJECT: COMBINING CITIZEN SCIENCE AND DISPERSION MODELLING TO IDENTIFY ODOUR SOURCES IN THE MUNICIPAL AREA OF CASTELLANZA (EN)

Beatrice Lotesoriere*, Laura Capelli

Politecnico di Milano, Department of Chemistry, Materials and Chemical Engineering "Giulio Natta"; Milano, Italy

Session about Odorants

12:30 MAIN LOSSES OF SAMPLED VOLATILE COMPOUNDS IN NALOPHAN BAGS: FOCUS ON SULPHUR COMPOUNDS (EN)

Jean-Michel Guillot^{1*}, Manuel Toledo Padrón²

1. IMT Mines Alès, France.

2. University of Cordoba, Spain.

12:45 EXPERIMENTAL STUDY ABOUT THE INFLUENCE OF WIND VELOCITY AND TEMPERATURE ON THE EMISSION RATE OF VOCs FROM LIQUID SURFACE (EN)

Francesca Tagliaferri*, L. Roveda, G. Scolieri, Marzio Invernizzi & Selena Sironi

Politecnico di Milano, Department of Chemistry, Materials and Chemical Engineering "Giulio Natta", Milan, Italy

13:00 LABORATORY AND FIELD STUDY ON THE ANALYSES OF SILOXANES IN BIOGAS BY TD-GC-MS (EN)

Elisabeth Dooms*, Kurt Hareens, P. Segers

OLFASCAN, a brand of Milvus Consulting, Belgium

13:15 Break (lunch)

Session about Odours

14:45 EN13725: NEW UPDATES ON THE REVIEW OF THE STANDARD

Anton Philip Van Harreveld (EN)

CEN/TC264/WG41 Convenor & founder Odournet group.

15:00 USING OLFACTOMETRY TO EVALUATE ODOR PERSISTENCY FROM SITES EMITTING ODOUR (EN)

Bart Kraakman^{3*}, Yuge Bian¹, Zihihang Yin², Scott Cowden³, Mel Suffet¹

1. Department of Env. Health Sciences

2. Department of Civil and Environmental

3. Engineering UCLA

15:15 OCCUPATIONAL EXPOSURE OF OLFACTOMETRIC EXAMINERS: POSSIBLE SOLUTIONS FOR THE RISK ASSESSMENT (EN)

Elisa Polvara^{1*}, Andrea Spinazzé², Marzio Invernizzi¹, Andrea Cattaneo², Selenia Sironi¹, Domenico Cavallo²

1. Department of Chemistry, Materials and Chemical Engineering "Giulio Natta", Politecnico di Milano, Milano, Italy.

2. Department of Science and High Technology DiSAT, Università degli Studi dell'Insubria, Como, Italy.

15:30 THE ODOUR IMPACT OF BROILER CHICKENS – COMPARISON OF THE THEORETICAL APPROACH WITH FIELD PANEL MEASUREMENTS (EN)

Nico Raes*, Toon Van Elst

OLFASCAN, a brand of Milvus Consulting NV, Belgium.

15:45 AN ODOUR ATTRIBUTION STUDY TO DETERMINE THE RELATIVE CONTRIBUTION FROM THREE FACILITIES FOR THE DEVELOPMENT OF REAL-TIME ODOUR MONITORING (EN)

Jay Witherspoon¹, Jerry Bovee², Scott Cowden¹, Mel Suffet³, Bart Kraakman^{1*}

1. JACOBS, Dallas, USA.

2. BAAQMD, San Francisco, USA.

3. University of California-Los Angeles, Los Angeles, USA.

16:00 ODOUR CONCENTRATION OF VARIOUS EMITTING AREA SOURCES FROM CATTLE FARMS (EN)

Margret Keck*, M. Keller¹ & S. Schrade²

1. Agroscope, Competitiveness and System Evaluation, Switzerland.

2. Agroscope, Ruminants Research Unit, Switzerland.

16:15 Break (Coffee) and poster session

Session about IOMS

17:00 THE LONG AND WINDING ROAD OF CEN/TC264/WG41 DEVELOPING A STANDARD FOR VALIDATING INSTRUMENTAL ODOUR MEASUREMENT SYSTEMS (EN)

Anton Philip van Harreveld

Convenor CEN/TC264/WG41 & founder Odournet group

- 17:15 FIELD TEST EVALUATION OF INSTRUMENTAL ODOUR MONITORING SYSTEMS WITH A NOVEL IN-SITU CALIBRATION APPROACH (EN)**
Wolfhard Reimringer^{1*}, Julian Joppich², Martin Leidinger¹, Thorsten Conrad¹, Bettina Mannebeck³, Christoph Mannebeck³, Andreas Schütze²
 1. 3S GmbH, Germany.
 2. Laboratory for Measurement Technology, Saarland University, Germany.
 3. Olfasense GmbH, Germany.
- 17:30 IOMS FOR THE REAL-TIME MONITORING OF ODOUR CONCENTRATION AT A MSW LANDFILL (EN)**
Carmen Bax*, Beatrice Lotesoriere, Laura Capeli
 Politecnico di Milano, Department of Chemistry, Materials and Chemical Engineering "Giulio Natta", Italy.
- 17:45 FIRST DEVELOPMENT OF A GAS SENSOR ARRAY FOR MONITORING AMMONIA SURFACE EMISSION FLUX FROM GRASSLANDS (EN)**
Marie Scheuren*, Anne Claude Romain
 Sensing of Atmospheres and Monitoring (SAM), Department of Environmental Sciences and Management, University of Liege, Belgium.
- 18:00 DETECTION OF GAS LEAKAGE FROM LANDFILLS USING OPTICAL GAS IMAGING COUPLED WITH FENCE MONITORING SYSTEM OF ODOUR BY IOMS: A CASE STUDY (EN)**
Federico Cangialosi^{1*}, Antonio Fornaro², Gabriella De Santis¹
 1. T&A - Tecnologia e Ambiente Sr, Italy.
 2. Lab Service Analytica S.R.L, Italy.
- 18:30 End of first day conference**
- 18:30 AMIGO meeting**
- 20:00 Gala Dinner**

The gala dinner will be held on the **NH Collection Villa de Bilbao**, on the evening of October 26. This is the perfect occasion to establish and enhance professional relationships with other members of the sector in a more relaxed atmosphere.



All the attendees already registered to this gala dinner will meet at the lobby of the hotel at 20:00, Gran via Don Diego López Haro 87, Bilbao.

Day 2 – 27st October 2021

8:55 Welcome

9:00 Keynote speakers

Session about Collectors

9:30 **ODOUR ABATEMENT IN A COLLECTION SYSTEM WITH HIGH SALINE INTRUSION** (ES)

Izaskun Astigarraga*, Asier López, J.J. Martínez, Fernando Ortega, Urko Sagasti

Consorcio de Aguas Bilbao Bizkaia, Spain.

9:45 **MANAGEMENT PLAN FOR THE CONTROL OF OFFENSIVE ODOURS IN THE SEWAGE SYSTEM OF CARTAGENA INDIAS CITY, COLOMBIA** (ES)

José E. Zapata*, V. Pérez, V. Florián

Aguas de Cartagena S.A E.S.P, Colombia.

Session about Bio-abatement

10:00 **INTERACTIONS OF THE REMOVAL OF ORGANIC ODORANT AND INORGANIC ODORANTS IN BIOTRICKLING FILTERS** (EN)

Dezhaou Liu*, Xianwang Kong, Shihao Ying, Zhen Cai

Key Laboratory of Equipment and Informatization in Environment Controlled Agriculture, Ministry of Agriculture and Rural Affairs, College of Biosystems Engineering and Food Science, Zhejiang University, Hangzhou, China

10:15 **NAVIGATING THE COMPLEX LANDSCAPE OF BIOLOGICAL ODOUR CONTROL SOLUTIONS FOR WASTE WATER APPLICATIONS** (EN)

Derek S. Webb*, C. Olesen

BIOREM, Canada.

10:30 **Mesophilic and thermophilic biofiltration of n,n- Dimethylformamide: long-term performance evaluation and Microbial communities' evolution** (EN)

Paula Alejandra Lamprea Pineda^{1*}, Kristof Demeestere¹, Manuel Toledo Padrón², Nico Boon³, Herman Van Langenhove¹, Christophe Walgraeve¹

1. Research group EnVOC, Faculty of Bioscience Engineering, Ghent University, Belgium.

2. Chemical Engineering Department, University of Córdoba, Spain.

3. Research group CMET, Faculty of Bioscience Engineering, Ghent University, Belgium.

10:45 **TECHNICAL AND ECONOMIC OPTIMIZATION OF THE DEODORIZATION OF A COASTAL WWTP THROUGH BIOLOGICAL PROCESSES** (ES)

Óscar J. Prado^{1*}, Josep Torà¹, Elvira César², Lidia Saúco², Maria Pignatelli², Jordi Robusté³

1. Aeris Tecnologías Ambientales S.L. ,Barcelona, Spain.

2. Depuración de Aguas del Mediterráneo S.L., Valencia, Spain.

3. Agència Catalana de l'Aigua, Barcelona, Spain.

11:00 OVERCOMING BIOAVAILABILITY LIMITATIONS FOR THE TREATMENT OF LOW CONCENTRATION GASES SUCH AS ODOURS AND INDOOR AIR POLLUTANTS (EN)

Bart Kraakman^{1,3*}, Javier González-Martín², Raquel Lebrero^{1,2}, Raúl Muñoz^{1,2}

1. Institute of Sustainable Processes, Univ. of Valladolid, Spain.
2. Depart. of Chem. Eng. and Environ. Technology, Univ. of Valladolid, Spain.
3. Jacobs Engineering UK, Temple Quay 1, United Kingdom.

11:15 ADVANCED PHOTO-BIOTECHNOLOGY FOR THE SIMULTANEOUS CONTROL OF VOCs, ODOURS AND GHGs EMISSIONS IN MUNICIPAL SOLID WASTE TREATMENT PLANTS (EN)

Vincenzo Senatore^{1*}, R. Pahunang², Giuseppina Oliva¹, Tiziano Zarra¹, A. Buonerba³, V. Belgiorio¹, F. Ballesteros Jr.⁴, Vincenzo Naddeo¹

1. Sanitary Environmental Engineering Division (SEED), Department of Civil Engineering, University of Salerno, Italy.
2. Environmental Engineering Program, National Graduate School of Engineering, University of the Philippines, Diliman, Quezon City, Philippines.
3. Inter-University Centre for Prediction and Prevention of Relevant Hazards (Centro Universitario per la Previsione e Prevenzione Grandi Rischi, C.U.G.R.I.), Italy.
4. Department of Chemical Engineering, University of the Philippines, Diliman, Quezon City, Philippines.

11:30 Break (Coffee)

Session about Abatement

12:15 LATEX-BASED BIOFILMS FOR INDOOR AIR PURIFICATION (EN)

Raúl Muñoz^{1,2}, Javier González-Martín^{1,2*}, Raquel Lebrero^{1,2}

1. Institute of Sustainable Processes, University of Valladolid, Spain
2. Department of Chemical Engineering and Environmental Technology, University of Valladolid, Spain.

12:30 NEW CHEMICAL MEDIA, ENVIRONMENTALLY FRIENDLY AND EFFICIENT (ES)

Jordi Balfagón^{1*}, Ramón Geli¹, Jeroni Hernández², N. Murillo²

1. Alphachem S.L., Spain.
2. GreenKeeper Iberia, Spain.

12:45 REMOVAL OF LIVESTOCK ODORANTS USING DIELECTRIC BARRIER DISCHARGE REACTOR AND BY-PRODUCTS FORMATION (EN)

Dezhaou Liu^{1*}, Xianwang Kong¹, Zhen Cai¹, Zhen Liu², Keping Yan²

1. Key Laboratory of Equipment and Informatization in Environment Controlled Agriculture, Ministry of Agriculture and Rural Affairs, College of Biosystems Engineering and Food Science, Zhejiang University, Hangzhou, China.
2. College of Chemical and Biological Engineering, Zhejiang University, China.

13:00 ODOROUS VOC REMOVAL BY AN ADVANCED WATER SCRUBBER IN WASTE WATER TREATMENT PLANT (EN)

Catherine Gracian*, Valérie Nastasi

Suez International, France.

13:15 COMPREHENSIVE EVALUATION OF GRANULAR ACTIVATED CARBON FROM THE DEODORISATION SYSTEM OF A WWTP AND REGENERATION FOR SUBSEQUENT REUSE (ES)

Pedro Márquez^{1*}, A. Benítez², Á. Caballero², J.A. Siles¹, M^a Ángeles Martín¹

1. Dpto. de Química Inorgánica e Ingeniería Química, Área de Ingeniería Química, Universidad de Córdoba, Córdoba, Spain.

2. Dpto. de Química Inorgánica e Ingeniería Química, Instituto Universitario de Nanoquímica, Universidad de Córdoba, Córdoba, Spain.

13:30 USE OF MULTISTAGE HYBRID TECHNOLOGY FOR THE TREATMENT OF EMISSIONS THAT PRESENT CRITICAL ISSUES IN TERMS OF VARIATIONS OF THE CONTAINED MIXTURES AND VOLATILITY (ES)

Riccardo Snidar¹, Enrico Pieri¹, Enea Merlin¹, Silvia Rivilli², Jorge Vicente^{3*}

1. Labio Test srl - Italy

2. Lod Srl - Italy

3. Deplan S.L. Spain

13:45 Break (Lunch)

Session about Modelling

15:15 NEW INTERNATIONAL GUIDELINE ON THE ASSESSMENT OF ODOR EXPOSURE USING DISPERSION MODELLING (EN)

Gunther Schaubberger

University of Veterinary Medicine, Austria

15:30 INNOVATIVE ODOUR IMPACT ASSESSMENT FOR WWTP USING EXPERIMENTAL AND DISPERSION MODELLING TECHNIQUES (EN)

José Vilarroig^{1*}, D. Miguel², M. García², A. Macías³, I. Beltrán⁴, J. Climent¹

1. Hydrodynamic and Environmental Services (HYDRENS), Castelló, Spain.

2. Sociedad de Fomento Agrícola Castellonense S. A. (FACSA), Castelló, Spain.

3. Department of Mechanical Engineering and Construction, Universitat Jaume I, Castelló, Spain

4. Excmo. Ayuntamiento de Castelló de la Plana, Castelló, Spain.

15:45 TOP-DOWN STRATEGY: TECHNOLOGY AND BIG DATA FOR AN ODOR-CONTROL MASTER PLAN (ES)

Cristian Reich^{1*}, Vania Zorich²

1. Subgerente General & CIO TSG, Chile.

2. Gerente Técnico TSG, Chile.

16:00 DISPERSION MODELLING AS A TOOL FOR ASSESSMENT AND MANAGEMENT OF ODOUR EMISSIONS FROM A WASTEWATER TREATMENT PLANT (ES)

Carlos Lafita^{2*}, Andreas Luckert¹, D. Aguado³, R. García⁴, N. Frank¹, Fernando Andrés Tomás²

1. Institute of Environmental Physics, Ruprecht-Karls University Heidelberg, Germany.

2. I+D+I Global Omnium, Valencia, Spain.

3. CALAGUA, Unidad Mixta UV-UPV, Institut Universitari d'Investigació d'Enginyeria de l'Aigua i Medi Ambient (IIAMA), Universitat Politècnica de València, Valencia, Spain.

4. Institut Universitari d'Investigació d'Enginyeria de l'Aigua i Media Ambient (IIAMA), Universitat Politècnica de València, Valencia, Spain.

16:15 MICROMETEOROLOGICAL METHODS FOR THE INDIRECT QUANTIFICATION OF ODOUR EMISSIONS (EN)

Laura Capelli^{1*}, Marzio Invernizzi¹, Beatrice Julia Lotesoriere¹, R. Sozzi², Selena Sironi¹

1. Politecnico di Milano, Department of Chemistry, Materials, and Chemical Engineering "Giulio Natta", Milan, Italy.

2. Independent Researcher, Milan, Italy.

16:30 Break (Coffee) and poster session

17:15 AIR PURIFICATION THROUGH ADVANCED BIOFILTRATION AND MONITORING OF ODOUR IMPACT OF ITS EMISSIONS THROUGH SENSORISATION AND IMPLEMENTATION OF THE AIRADVANCED™ PLATFORM (ES)

Javier Mesones*, Agustín Torres, Ignacio Valor, David Cartelle, Anxo Rodriguez, José Manuel Vellón

Labaqua, S.A.U. Air Quality Department, Alicante, Spain.

Session about Drones

17:30 DRONE-BASED ENVIRONMENTAL ODOUR MONITORING: SNIFFDRONE (ES)

María Deseada Esclapez^{3*}, M.J. Burgués^{1,2}, Silvia Doñate³, Lidia Saúco³, Santiago Marco^{1,2}

1. Institute for Bioengineering of Catalonia (IBEC), The Barcelona Institute of Science and Technology, Barcelona, Spain.

2. Department of Electronics and Biomedical Engineering, Universitat de Barcelona, Barcelona, Spain.

3. Depuración de Aguas del Mediterráneo (DAM), Paterna, Spain.

17:45 THE USE OF CHEMICAL DRONE SENSOR TECHNOLOGY IN ASSESSING EMISSION RATES AND DEPOSITION FROM AREA SOURCES (EN)

Niels De Baerdemaeker¹, M-A. Vandenabeele², Kurt Haerens¹, S.Degryse³, Toon Van Elst^{1*}

1. OLFASCAN, a brand of Milvus Consulting NV, Belgium.

2. Eco-scan, a brand of Milvus Consulting NV, Belgium.

3. Drone Division, Belgium.

18:00 AN INNOVATIVE WIRELESS TOOL FOR OFF-GAS EMISSIONS AND OXYGEN TRANSFER EFFICIENCY ASSESSMENT IN WRRFS AERATION TANKS (EN)

Cecilia Caretti^{1*}, I. Ducci¹, F. Spennati², S. Neri³, M. Spizzirri⁴, S. Dugheri⁵, R. Gori¹

1. Civil and Environmental Engineering Department, University of Florence, Florence, Italy.

2. Consorzio Cuoidepur SpA, San Romano, Italy.

3. West Systems Srl, Pontedera, Italy.

4. Acea Spa, Rome, Italy.

5. Experimental and Clinical Medicine Department, University of Florence, Florence, Italy.

18:15 Close of Conference

18:30 IWA meeting

*The organizers reserve the right to adjust the program according to special requirements.



Exhibition Hall

On the exhibition hall of the event, you could find the posters and stands. We invite you to visit and see all of them.

POSTERS

During the coffee breaks of the afternoon, the authors of the following posters will be presenting their topics in short 2-min speeches.

Author	Title
J. Lozano et al.	<i>Personal IOMS for performing odours and pollutants maps</i>
J. Piñón et al.	<i>Improvement of odour dispersion modelling performance and capabilities using advanced continuous monitoring</i>
A. Luckert et al.	<i>H₂S odour management in a sewer pumping well through air quality measurement and dispersion modelling</i>
D. Liu et al.	<i>Ammonia reduction and recovery through wet scrubber/biotrickling filter combined with microalgae system</i>
D. Liu et al.	<i>Photocatalytic Oxidation of Odorous Compounds using Zr-based MOF@TiO₂ Core-Shell Structured Particles</i>
E. Ibarrola-Ulzurrun et al.	<i>Evaluation Of Sensor-based Air Quality Monitoring Station</i>
J.C. Mifsud et al.	<i>On line monitoring of Odor Unit (OU) emissions and odor sources identification, by using a new generation of gas and odors analyzers</i>
L. Saúco et al.	<i>Wastewater Odor Cloud (WOC) platform for the preventive management of odoriferous gases in Wastewater Treatment Plants</i>
I. Merino et al.	<i>Benefits of using multiple absorbers for effective odor control throughout the cannabis growing cycle.</i>
S. Bootsma et al.	<i>Odour impact analysis with eNoses in residential area</i>
I. de Lucas et al.	<i>Real case study of the Nasapp app</i>
Basque Government	<i>Air quality monitoring using mobile laboratories: a real case study from the Basque Country</i>

BOOTHS

During this 2 days conference, all the attendees could visit these 18 booths on the exhibition hall.



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IWA member?

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Keynote Speakers

We are proud of our great keynote speakers panel, **5 Women from 5 continents**. These experts will share the most up to date news on odour management in their regions.



Ms. Anna Bokowa, Canada, is the President and senior consultant of Environmental Odour Consulting with over 24 years of experience in odour assessment and project planning. She has served as national technical resource for odour impact assessments and has directed several air quality studies. Anna is Chair of the A&WMA EE-6 Odour Committee for Standardization of Odours in the USA.



Ms. Jennifer Barclay, New Zealand, has more than 28 years' experience in advanced meteorological studies and atmospheric dispersion modelling. She was considered the 'Odour Expert' of the Atmospheric Studies Group (Developers of CALPUFF).



Ms. Weifang Li, China, has a PhD in Environmental Science by the University of Nankai, China. She is a senior scholar at Tianjin Academy of Eco-environmental Sciences, and author many papers on odour assessment, management policy and control technology. She coordinates the National Key Laboratory on Environment and Odour Pollution Control of China.



Ms. Daniela Caimanque, Chile, is a professional in the Noise, Light and Odour Department of the Chilean Ministry of the Environment. She is also the coordinator for the elaboration of public policies on air quality and specializes in environmental odour regulation, with more than 10 years of experience.



Ms. Laura Capelli, Italy, is an assistant professor at the Department of Chemistry, Materials and Chemical Engineering "Giulio Natta" of Politecnico di Milano, Italy. Her research relates to odour assessment, focusing on odour sampling, development of e-noses, dispersion modelling and characterization of odour emissions from industrial activities. She has authored more than 100 papers in international journals and conferences.



Workshop, 25th October



We have an exciting workshop on the new Odour Regulation in Germany that will be run by Dr. Ralf Booth on the 25th October 2021, at 17:00 in C/Urbitarte street, 6, in Bilbao Berrikuntza Faktoria building, at room 308 (Registration needed)

The German Guideline on Odour in Ambient Air (GOAA) has been present for over two decades, but it remained only as a guideline. In May, the Federal Council of Germany approved that the amendment of the TA Luft and now odour impact criteria set in the GOAA will be incorporated into the TA Luft, meaning that the GOAA will attain the status of an odour regulation. Learn more about this update on the course.

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Euskadi, auzolana, bien común

EUSKO JAURLARITZA



GOBIERNO VASCO



Run with Carlos, 27th October

Whether you're a keen or a casual runner, 'Run with Carlos' is a great way to see the sites of the city. We often do not have too much time for exploring the beautiful places during business trips, so this is the perfect opportunity to see what Bilbao has to offer!

Join Carlos on a relaxing 5 km run around Bilbao on the 27th October at 7:00 am and arrive to the conference feeling energized and ready to take on the last day!



Meeting Point: 'The Puppy' Guggenheim Museum Bilbao (Abandoibarra Etorb., 2)

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