

Currilicum vitae for Dr Nora Zannoni

Name Nora Zannoni
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Scopus 56866304000
Nationality Italian
Research interests *Sources and sinks of volatile organic compounds, biosphere-atmosphere interactions, indoor air chemistry*

Education

01/11/2012-30/11/2015 PhD in atmospheric chemistry at Laboratoire des sciences du climat et de l'environnement (LSCE- Centre national de la recherche scientifique (CNRS)) and University Paris XI, France.
Thesis: "OH reactivity measurements in the Mediterranean region".
Fellowship: Marie Curie Early Stage Researcher Initial Training Network "Proton Ionization Molecular Mass Spectrometry".
01/09/2009- 01/11/2011 MSc. in Chemistry, University of Copenhagen, Denmark.
Thesis: "A volatility study on organic compounds in atmospheric aerosols" (12/12).
01/10/2004- 20/07/2009 BSc. in Chemistry, University of Florence, Italy.
Thesis: "Spectroscopic study of *sigillate ceramic*" (101/110).
01/09/2006- 01/06/2007 Exchange student under the European project Erasmus, Universidad Autonoma de Madrid, Spain.

Working Experience

15/05/2023- on going Researcher at Institute of Atmospheric Sciences and Climate National Research Council (CNR-ISAC) Bologna, Italy
01/01/2022- 15/05/2023 Postdoctoral scientist at CNR-ISAC, Italy
01/3/2017- 31/12/2021 Postdoctoral scientist at Max Planck Institute for Chemistry, Germany
01/12/2015-31/12/2016 Postdoctoral scientist at LSCE, France
01/12/2011- 15/09/2012 Research assistant, CCAR, University of Copenhagen, Denmark.
01/10/2010- 01/12/2011 Laboratory technician assistant, Centre for Ice and Climate, Niels Bohr Institute, University of Copenhagen, Denmark.

Research activity and field work

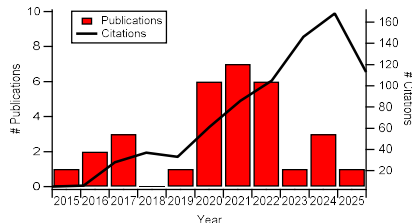
10/2024- on going **ACTRIS at CMN**, Monte Cimone Observatory (2165m), Italy
09/2024 **EMEP-ACTRIS VOC urban campaign in Europe**, Bologna, Italy
04/2024-05/2024 **ECOSISTER**, Indoor air chemistry of an occupied office, Bologna, Italy
09/2023-11/2023 **ALFA**, rural Po valley, Italy
01/2023- 03/2024 **RI-URBANS** Milan, Italy
10/2022 **ACSM-ToF intercomparison campaign for ACTRIS**, Sirta, France
01/2022-06/2022 **FAIRARI**, rural Po valley, Italy.
04/2021 **ICHEAR2**, DTU, Denmark.
04/2019-05/2019 **ICHEAR 1** (Indoor Chemical Human Emissions and Reactivity), DTU, Denmark.
2017- 2021 **ATTO** (Amazonian Tall Tower Observatory) x6, Brazil.
06/2017-06/2018 **HOMING** (Hunting Organic Molecules In Navigation), Pisa, Italy
06/2016-07/2016 **COV3ER** (BVOC fluxes from croplands), INRA, France
10/2015 **kOH intercomparison**, FZJ, Germany
06/2015-07/2015 **PISA** (PImms-SAphir), FZJ, Germany
05/2014-06/2014 **CANOPEE 2014**, Observatoire Haute Provence, France
06/2013-08/2013 **ChArMEx** (OH reactivity Mediterranean region) Corsica, France

Student supervision

12/2022- 10/2023	Supervision BSc. Thesis of Marzia Villa, “Analysis of volatile organic compounds from the urban area of Milan”, University of Bologna.
10/2018-08/2021	Co-supervision MSc. thesis of Caroline Kako Ostermann, “Chiral BVOC fluxes from Amazonia and Atlantic rainforests” supervisors Prof. Oscar Vega, IPEN, Brazil and Prof. Jonathan Williams, MPIC, Germany
11/2017-06/2018	Co-supervision PhD thesis of visiting student Chiara Seghetti, “Monitoring biogenic volatile organic compounds (BVOCs) in air with analytical techniques”, University of Camerino, Italy, supervisor Prof. Jonathan Williams, Max Planck Institute for Chemistry, Germany.
11/2016-12/2016	Experimental training and data analysis with the comparative reactivity method to PhD student Sandy Bsaibes, supervisor Dr. Valerie Gros, LSCE, France
02/2012-06/2012	Co-supervision MSc. thesis of Brendan Mahon, “Evaporation of succinic acid in mixed aerosol particles” supervisor Prof. Merete Bilde, University of Copenhagen

Publications

(*h*-index=16 from Scopus)



1) Peer reviewed open access journals

1. **Zannoni N.** et al.: *Intercomparison of two comparative reactivity method instruments in the Mediterranean basin during summer 2013*, Atmos. Meas. Tech., 8, 3851-3865, doi:10.5194/amt-8-3851-2015, 2015.
2. **Zannoni N.** et al.: *OH reactivity and concentrations of biogenic volatile organic compounds in a Mediterranean forest of downy oak trees*, Atmos. Chem. Phys., 16, 1619-1636, doi:10.5194/acp-16-1619-2016, 2016.
3. Yáñez-Serrano A. M. et al.: *Atmospheric mixing ratios of methyl ethyl ketone (2-butanone) in tropical, boreal, temperate and marine environments*, Atmos. Chem. Phys., 16, 10965–10984, <https://doi.org/10.5194/acp-16-10965-2016>, 2016.
4. **Zannoni N.** et al.: *Summertime OH reactivity from a receptor coastal site in the Mediterranean Basin*, Atmos. Chem. Phys., 17, 12645-12658, <https://doi.org/10.5194/acp-17-12645-2017>, 2017.
5. Fuchs H. et al.: *Comparison of OH reactivity measurements in the atmospheric simulation chamber SAPHIR*, Atmos. Meas. Tech., 10, 4023–4053, <https://doi.org/10.5194/amt-10-4023-2017>, 2017.
6. Michoud V. et al.: *Organic carbon at a remote site of the western Mediterranean Basin: Sources and chemistry during the ChArMEX SOP2 field experiment* Atmos. Chem. Phys., 17, 8837-8865, <https://doi.org/10.5194/acp-17-8837-2017>, 2017.
7. Schramm S, **Zannoni N.**, et al. *New application of direct analysis in real time high-resolution mass spectrometry for the untargeted analysis of fresh and aged secondary organic aerosols generated from monoterpenes*. Rapid Commun Mass Spectrom. 2019; 1–10. <https://doi.org/10.1002/rcm.8228>
8. Bsaibes S. et al.: *Characterization of Total OH Reactivity in a Rapeseed Field: Results from the COV3ER Experiment in April 2017*. Atmosphere 2020, 11, 261 <https://doi.org/10.3390/atmos11030261>
9. Bekö G. et al.: *The Indoor Chemical Human Emissions and Reactivity (ICHEAR) Project: Overview of Experimental Methodology and Preliminary Results*. Indoor Air 2020, 30 (6), 1213–1228. <https://doi.org/10.1111/ina.12687>.
10. **Zannoni N.** et al.: *Identifying volatile organic compounds used for olfactory navigation by homing pigeons*. Sci Rep 10, 15879 (2020). <https://doi.org/10.1038/s41598-020-72525-2>

11. **Zannoni N.** et al.: *Surprising chiral composition changes over the Amazon rainforest with height, time and season.* Commun Earth Environ 1, 4 (2020). <https://doi.org/10.1038/s43247-020-0007-9>
12. Wang, N., **Zannoni, N.** et al.: *Total OH Reactivity of Emissions from Humans: In Situ Measurement and Budget Analysis.* Environ. Sci. Technol. 2021, 55 (1), 149–159. <https://doi.org/10.1021/acs.est.0c04206>.
13. Pfannerstill E. Y. et al.: *Total OH reactivity over the Amazon rainforest: variability with temperature, wind, rain, altitude, time of day, season, and an overall budget closure,* Atmos. Chem. Phys., 21, 6231–6256, <https://doi.org/10.5194/acp-21-6231-2021>, 2021.
14. **Zannoni N.** et al.: *The effect of ozone, clothing, temperature and humidity on the total OH reactivity emitted from humans,* Environ. Sci. Technol., <https://doi.org/10.1021/acs.est.1c01831>, 2021.
15. Wikelski M. et al.: *Smell of green leaf volatiles attracts White storks to freshly cut meadows,* Sci Rep 11, 12912 (2021). <https://doi.org/10.1038/s41598-021-92073-7>.
16. **Zannoni N.:** *Homing pigeons find their way home by smelling the air,* The Science Breaker, 2021 <https://doi.org/10.25250/thescbr.brk553>.
17. Yang, S. et al.: *Ozone Initiates Human Emission of Nanocluster Aerosols,* Environmental Science & Technology 2021 55 (21), 14536-14545 DOI: 10.1021/acs.est.1c03379, (2021).
18. Edtbauer A. et al.: *Cryptogamic organisms are a substantial source and sink for volatile organic compounds in the Amazon region.* Commun Earth Environ 2, 258 (2021). <https://doi.org/10.1038/s43247-021-00328-y>
19. Loubet B. et al.: *Volatile organic compound fluxes over a winter wheat field by PTR-Qi-TOF-MS and eddy covariance,* Atmos. Chem. Phys., 22, 2817–2842, <https://doi.org/10.5194/acp-22-2817-2022> (2022).
20. E. Gomes Alves et al., *Seasonal shifts in isoprenoid emission composition from three hyperdominant tree species in central Amazonia,* Plant Biol J, doi:10.1111/plb.13419 (2022).
21. Li M. et al.: *Human metabolic emissions of carbon dioxide and methane and their implications for carbon emissions.* Science of The Total Environment, 155241 (2022).
22. **N. Zannoni** et al: *The human oxidation field.* Science. 377, 1071–1077 (2022).
23. Leppla, D., **Zannoni, N.** et al: *Varying chiral ratio of pinic acid enantiomers above the Amazon rainforest,* Atmos. Chem. Phys., 23, 809–820, <https://doi.org/10.5194/acp-23-809-2023>, (2023).
24. Cai J. et al: *Elucidating the mechanisms of atmospheric new particle formation in the highly polluted Po Valley, Italy,* Atmos. Chem. Phys., 24, 2423–2441, <https://doi.org/10.5194/acp-24-2423-2024>, 2024
25. Buysse, P. et al.: *First measurements of ecosystem-scale biogenic volatile organic compound fluxes over rapeseed reveal more significant terpenoid emissions than expected,* EGU sphere [preprint], <https://doi.org/10.5194/egusphere-2023-2438>, 2024.
26. Langer S. et al.: *Squalene Depletion in Skin Following Human Exposure to Ozone under Controlled Chamber Conditions.* Environ. Sci. Technol., doi: 10.1021/acs.est.3c09394 (2024).
27. Nora **Zannoni** et al.: *Personal care products disrupt the human oxidation field.* Sci. Adv.11,eads7908(2025). DOI:10.1126/sciadv.ads7908
28. Leppla D. et al.: *Comprehensive Non-targeted Molecular Characterization of Organic Aerosols in the Amazon Rainforest,* EGU sphere [preprint], <https://doi.org/10.5194/egusphere-2025-141>, 2025.
29. Pinheiro-Oliveira D. et al.: *Forest Diversity and Environmental Factors Shape Contrasting Soil-Litter BVOC and Methane Fluxes in Three Central Amazonian Ecosystems,* EGU sphere [preprint], <https://doi.org/10.5194/egusphere-2025-2895>, 2025.
30. Joseph Byron et al. *Mirror image molecules expose state of rainforest stress,* 03 June 2025, PREPRINT (Version 1) available at Research Square [<https://doi.org/10.21203/rs.3.rs-6394095/v1>]
31. Cristofanelli P. et al., *Urban CO₂ and CH₄ atmospheric measurements in the Milan city area (northern Italy),* submitted to Atmospheric Environment on 5/6/2025

2) Book chapters

Loubet B., Baisnee D., Cazaunau M., Cheiney A., Ciuraru R., Clerbaux C., Doussin J.F., Dufour G., Flécharde C., Focsa C., George C., Gros V., Hassouna M., Jaffrezzo J.L., Kammer J., Laville P., Mellouki W., Millet, P., Petitprez D., Quivet E., Redon N., Sarda-Esteve R., Sauvage S., Uzu G., Villenave E., **Zannoni, N.** (2020) Measuring Air Pollutant Concentrations and Fluxes. In: Bedos C., Génarmont S., Castell JF., Cellier P. (eds) Agriculture and Air Quality. Springer, Dordrecht. https://doi.org/10.1007/978-94-024-2058-6_6

Gros, V., & Zannoni, N. (2022). Total OH reactivity. In F. Dulac, S. Sauvage, & E. Hamonou (Eds.), *Atmospheric chemistry in the Mediterranean* (Vol. 2, From air pollutant sources to impacts). Springer, in press. https://doi.org/10.1007/978-3-030-82385-6_7

Nora Zannoni (2023). The Earth's atmosphere. In I. Riccardi, & C. Sand-Iversen (Eds.), *Our Future with Nature*. Really Simple Syndication, Copenhagen. <https://www.rssprss.net/shop/p/our-future-with-nature>
This work accompanied the exhibitions "The Writing of Nature" and "Nature-scape", held by the SixtyEight Art Institute in Copenhagen, Denmark.

3) PhD Thesis

Nora Zannoni. *OH reactivity measurements in the Mediterranean region*. Analytical chemistry. Université Paris Saclay (COMUE), 2015. English. (NNT : 2015SACL163). (tel-01407352) <https://theses.hal.science/tel-01407352/>

4) Conference proceedings > #35

Presentations at conferences

- EGU 2025, 05/2025, Vienna, Austria. *Volatile organic compounds at two urban areas in the Italian Po Valley: Milan and Bologna*, **Solicited oral presentation**.
- EGU 2025, 05/2025, Vienna, Austria. *Urban CO₂ and CH₄ atmospheric measurements in the Milan city area (northern Italy)*, **Oral presentation**.
- EGU 2025, 05/2025, Vienna, Austria. *Identifying volatile organic compounds at a rural site in the Italian Po Valley*, **Poster presentation**.
- ATTO workshop 10/2022, online. *Investigating the atmospheric impact of sesquiterpenes emitted from the Amazon rainforest*, **Poster presentation**.
- Indoor Air 2022, 06/2022, online. *Humans generate high concentrations of hydroxyl (OH) radicals when exposed to ozone*, **Oral presentation**.
- PM 2022, 05/2022, Bologna, Italy. *Volatile organic compounds influencing new particle formation events in the Po Valley*, **Poster presentation**.
- ATTO workshop 10/2021, online. *Atmospheric impact of sesquiterpenes at the ATTO site*, **Poster presentation**.
- Indoor Air 2020, 11/2020, online. *Total OH reactivity of human beings*, **Oral presentation**.
- EGU 2020, 04/2020, online. *Atmospheric impact of sesquiterpenes in the Amazon rainforest*, **Poster presentation**.
- AGU 2019, 12/2019, San Francisco, USA. *Surprising chiral composition changes over the Amazon rainforest with height, time and season*, **Oral presentation**.
- ATTO workshop, 09/2019, INPA, Manaus, Brazil. *Chiral composition changes over the Amazon rainforest with height and time of day*, **Poster presentation**.
- EGU 2019, 04/2019, Vienna, Austria. *DIEL, VERTICAL AND SEASONAL TRENDS OF BVOCs IN THE AMAZONIAN RAINFOREST FROM THE 325 m ATTO TOWER*, **Poster presentation**.
- ACTRIS conference on Time series in the environment, 01/2019, Tromsø, Norway. *DIEL AND SEASONAL TRENDS OF BIOGENIC VOLATILE ORGANIC COMPOUNDS FROM THE AMAZONIAN TROPICAL RAINFOREST*, **Poster presentation**.
- Gordon Research Conference on Biogenic Hydrocarbons & the Atmosphere, 06/2018, Les Diablerets, Switzerland. *Exploring chiral BVOCs in the Amazonian dry season*, **Poster presentation**.
- 1st review meeting "ULTRACHIRAL" project, 02/2018, European commission, Bruxelles, Belgium. *Exploring Chiral BVOCs in the Amazonian dry season*. **Oral presentation**.
- ISSS, 23rd International symposium on separation sciences, 09/2017, Vienna, Austria. *Fingerprinting chiral VOCs in the Amazonian rainforest*. **Poster presentation**.
- 7th international PTR-MS conference 2016, 02/2016, Obergurgl, Austria. *OH reactivity at a Mediterranean coastal site*. **Poster presentation (Awarded Best Poster Prize, 1st prize)**.
- Molecular Physics conference 2015, 07/2015, Caen, France. *OH reactivity in the Mediterranean region*. **Poster presentation**.
- EGU 2015, 04/2015, Vienna, Austria. *Total OH reactivity in a Mediterranean forest of downy oaks*. **Oral presentation**.
- OH Reactivity Specialists Uniting Meeting (ORSUM), 10/2014, Mainz, Germany. *OH reactivity measurements in two biogenic Mediterranean environments: Corsica and Provence*. **Oral presentation**.
- IGAC 2014, 09/2014, Natal, Brazil. *Preliminary results of total OH reactivity in a Mediterranean Oak forest*. **Poster presentation**.
- Gordon Research Conference on Biogenic Hydrocarbons & the Atmosphere, 07/2014, Girona, Spain. *Impact of Biogenic Volatile Organic Compounds on Total OH reactivity at a remote site in the Mediterranean basin during summer 2013*, **Poster presentation**.

- EGU 2014, 05/2014, Vienna, Austria. *Intercomparison of two Comparative Reactivity Method instruments in the Mediterranean basin during summer 2013*, Vol. 16, -12532-1, 2014. **Poster presentation.**
- European Aerosol Conference 2012, 09/2012, Granada, Spain. *A tandem DMA study on selected sugars and sugar alcohols*, **Poster presentation.**
- Cryosphere-atmosphere interactions in a changing arctic climate (CRAICC) first annual meeting, 10/2011, Iceland. *Evaporation rates of levoglucosan submicron particles*, **Poster presentation.**
- Cryosphere-atmosphere interactions in a changing arctic climate (CRAICC) Kick off meeting, 02/2011, Helsinki, Finland. *Evaporation of dry mixed organic/inorganic aerosols*. **Poster Presentation.**

Invited talks

- “Measuring OH reactivity on the field through the Comparative Reactivity Method” 25/09/2013 Aarhus University, Denmark
- “OH reactivity measurements, theory and experiments with PTR-MS and CRM”, for ECLAIRE winter school: “Measurement and modelling of biosphere-atmosphere exchanges of trace gases and aerosols” 02/2014 LSCE, France.
- “Total OH reactivity measurement using comparative reactivity method (CRM): methodology and application in indoor air study” for the International Society of Indoor Air Quality and Climate 19/06/2019, online
- “Mass Spectrometry applied to Atmospheric Sciences” for the class “Principios e aplicações da espectrometria de massas”, Prof. Oscar Vega, University of Sao Paulo, Brazil. 03/2022
- “Characterizing organic reactive molecules in the air” 21/02/2024 CNR Bologna
- “Studio dei composti organici volatili in ambienti inquinati con spettrometria di massa a reazione di scambio protonico”, 20/03/2024 University of Bologna, Italy
- “Characterizing Organic Reactive Molecules in the Air”, 18/02/2025 LSCE, France
- “Proton transfer reaction analyses for VOC measurements”, 20/05/2025 ITINERIS training, Sestola, Italy

Editorial activity and community engagement

Editorial Board Member of *Communications Earth&Environment*, *Nature group* (since January 2024).

Reviewer for *Atmospheric Environment*, *Atmospheric Chemistry and Physics*, *Atmospheric Measurement Technique*, *Environmental Science and Technology (ACS)*, *Environmental Science and Pollution Research (Springer)*, *Chemoecology (Springer)*, *Forests*, *Frontiers*, *Communications Earth& Environment*.

Convener for the ATTO workshop 2021 (online, 10/2021, #150 participants).

Conference reviewer for Indoor Air 2022, Healthy Buildings Asia 2023, Indoor Air 2024.

Representative Board of Early Career Scientists “ILEAPS (Integrated Land Ecosystem-Atmosphere Processes Study)” European and Mediterranean division, (2017- 2022).

Outreach activity

- **Animal behaviour**

<https://www.mpg.de/17069936/storks-smell?c=2249>

<https://www.welt.de/regionales/rheinland-pfalz-saarland/article231979721/Geruchssinn-Duft-von-gemaechtem-Gras-lockt-Stoerche-an.html>

<https://www.suedostschweiz.ch/wirtschaft/2021-06-21/unterschaetzter-geruchssinn-duft-von-gemaechtem-gras-lockt-stoerche-an>

<https://www.mpg.de/15506106/odours-navigation-pigeon?c=2249>, Interview.

<https://www.derstandard.de/story/2000122684956/tauben-erstellen-exakte-geruchslandkarten-zur-orientierung?ref=rec>

- **ATTO project**

ATTO site neighboring communities informative science project for local students and teachers (communities Uatumã river, Amazonia, Brazil)

<https://www.attoproject.org/study-termites-as-bvoc-source/>, Interview.

<https://ecoevocommunity.nature.com/posts/fingerprinting-sources-of-emissions-of-volatile-organic-compounds-in-the-amazonian-rain-forest> author

<https://www.attoproject.org/total-oh-reactivity/>

<https://www.attoproject.org/cryptogams-are-an-important-source-for-bvoc-emissions-in-tropical-forests/>

“Il pianeta sotto gli occhi”, *Internazionale* 3/9 May 2024, nr. 1561

<https://www.internazionale.it/magazine/2024/05/02/il-pianeta-sotto-gli-occhi>

<https://bologna.repubblica.it/cronaca/2024/05/10/news/donna-cambiamento-climatico-amazonia-pianura-padana-422909883/>, Interview.

TV show “Bologna a colori”, TRC Bologna, 28/05/2024, Live interview.

<https://www.lanazione.it/prato/cronaca/la-pratese-che-studia-latmosfera-in-amazonia-per-capire-il-clima-804b5f39>, Interview.

“Ubiquitous Anomaly” photo exhibition from Fabio Cian, exhibited at Imago Lisboa Photo Festival 2024, Galeria de Santa Maria Maior, Lisbon, Portugal 3/10/2024- 2/11/2024

- **The Human Oxidation Field**

<https://www.mpg.de/19157061/0902-chem-oxidation-field-152990-x?c=2249>, Interview.
<https://www.science.org/doi/10.1126/science.add8461>, perspective article about the paper
 Science Podcast AAAS, 1/09/2022 <https://www.science.org/content/podcast/using-free-floating-dna-find-soldiers-remains-and-how-people-contribute-indoor-air>, Live interview.
<https://www.nationalgeographic.de/wissenschaft/2022/09/chemische-aura-wie-menschen-die-luft-in-innenraeumen-beeinflussen>
<https://www.the-scientist.com/news-opinion/a-new-culprit-in-air-pollution-reactions-triggered-by-human-skin-70455>
<https://www.bbc.com/portuguese/curiosidades-62976278>, Interview.
<https://www.cnr.it/it/news/11344/nora-zannoni-dal-max-planck-al-cnr-isac>
<https://www.faz.net/aktuell/wissen/chemie-schleier-in-innenraeumen-braut-der-mensch-sich-seine-eigenen-giftwolken-18293761.html>
<https://pubs.acs.org/doi/10.1021/cen-10044-cover6>
<https://cen.acs.org/education/science-communication/CENs-Year-Chemistry-2022/100/i44>
 (recognized as “fascinating chemistry findings of 2022” by C&EN mag)

- **Po Valley**

<https://www.isac.cnr.it/en/content/newsletter-cambiamenti> RIURBANS Maggio 2024, author.
<https://www.isac.cnr.it/en/content/newsletter-cambiamenti> INDOOR Agosto 2024, author.
 Educational event for school teachers (primary-middle-high schools) for delivering tools about air quality to use in school:
 “L’aria che respiriamo: come cambia la qualità dell’aria in ambienti outdoor e indoor, focus sui composti organici volatili” 14/02/2025, Bologna, Italy
 Educational program for citizens: “Sentiero dell’atmosfera” social hike to Mt.Cimone Observatory through the atmospheric trail, a trail where scientific panels describing the atmosphere have been installed. Sestola, Italy 2022-2025
<https://www.sentieratmosfera.it/>

- **Personal care products& indoor air quality**

Science Podcast AAAS, 22/05/2025 <https://www.science.org/content/podcast/strange-metals-and-our-own-personal-oxidation-fields>), live interview.
 Podcast “Calidad en vida” Radio Universidad Mar del Plata, Argentina 15/06/2025 <https://www.programa-ecos.com.ar/calidadenvida.html>, interview
 “Profumi e lozioni alterano la chimica dell’aria al chiuso” ANSA news, interview
https://www.ansa.it/canale_scienza/notizie/fisica_matematica/2025/05/31/profumi-e-lozioni-alterano-la-chimica-dellaria-al-chiuso-fe934ac9-0116-4038-b827-bad7fb4dfed3.html
 Vice news, <https://www.vice.com/en/article/your-perfume-might-be-destroying-your-skins-anti-pollution-shield/> Science news article on the paper <https://www.science.org/content/article/lotions-and-perfume-can-weaken-human-oxidation-field-made-your-skin>
 “Crema e profumi alterano ciò che siamo”, Repubblica Salute, 26/06/2025, Interview.

Language Skills

	Native	Excellent	Medium	Basic
Italian	X			
English		X		
Spanish			X	
French			X	
German				X
Danish				X
Portuguese				X

IT skills

Microsoft Office tools, iGOR Wavemetrics, PTR-MS viewer, Chem Station, Mass Hunter, TOF-DS, Chromspace, basic skills in MatLab and Rstudio, Tofware.

Other information

Driving license (B), swimming (>20 years), open water diving license (18m depth), trained to conduct first aid in remote locations and from towers, experienced in working in extreme conditions (tropical environment) and on tall towers (40-325 m).