

**EUROPEAN
CURRICULUM
VITAE
FORMAT**



PERSONAL INFORMATION

Name **ANTONIO MARCOMINI**
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Nationality Italian
Place and date of birth ROME, 1956

WORK EXPERIENCE

- Dates (from – to) Since 2014
 - Name and address of employer University Ca' Foscari Venice
Department of Environmental Science, Informatics and Statistics
Via Torino 155, 30172 Venice
Phone +39-041-234-8548-8690
Fax. +39-041-234-8548
- Type of business or sector Academy
 - Occupation or position held Director of the Department of Environmental Science, Informatics and Statistics
- Dates (from – to) Since 2000
 - Name and address of employer University Ca' Foscari Venice
Dipartimento di Scienze Ambientali, Informatica e Statistica
Via Torino 155, 30172 Venice
Phone +39-041-234-8548
Fax. +39-041-234-8548
- Type of business or sector Academy
 - Occupation or position held Full Professor

Born in Rome (1956), Antonio Marcomini is professor of Environmental Chemistry at the University Ca' Foscari of Venice. Graduated from the University of Padua, he was post-doctoral fellow at the University of Toronto, Lash Miller Chemical Institute, Canada (1982-83), and then research associate at the Polytechnic of Zurich, ETH-EAWAG, Switzerland (1985-86). Coordinator/partner of several international and national research projects, he is author/coauthor of >250 papers published in international peer reviewed journals, editor and coauthor of two books. According to the ISI web of science, the H-index over the 1986-2018 period is 49. Consultant of international

(e.g. European Science Foundation, European Environmental Agency, etc.) and national (e.g. Ministry of the Environment, Venice Water Authority, etc.) advisory/expert committees on chemical environmental quality, environmental risk assessment, definition and implementation of environmental quality standards.

Teaching activities: courses for undergraduate and graduate students in Chemistry: Pollution Chemistry, Environmental Impacts of Industrial Productions, Lab. of Environmental Chemistry. Courses for undergraduate and graduate students in Environmental Sciences: Environmental Impact Assessment, Assessment and Management of Environmental Risks. Courses for Ph.D. students in Science and Management of Climate Change: Climate Change and Environmental Contamination.

Research activities: coordinator, WP leader and principal Investigator of EU-international and national projects, leader/coordinator of research groups.

Main research projects over the last 5 years:

BIORIMA - BIOMaterial Risk Management (2017-2021 project ID: 760928) funded by the European Horizon 2020 programme

caLIBRAte - Performance testing, calibration and implementation of a next generation system-of-systems Risk Governance Framework for nanomaterials (2016-2019, project ID 686239) funded by the European Horizon 2020 programme

NanoFASE, Nanomaterial FAtE and Speciation in the Environment (2015–2019, project ID 646002) funded by the European Horizon 2020 programme

NANORESTART, NANOMaterials for the REStoration of works of ART (2015–2019, project ID 646063) funded by the European Horizon 2020 programme

SUN Sustainable Nanotechnology, (2013–2017, contract number 604305) funded by the European 7th Framework Program and coordinated by Ca' Foscari University – Prof. Marcomini.

ECONANOSORB, Ecological application of nanosorbents on the base of natural and synthetic ionites and carbons, (2012-2016, contract number 295260) funded by the European 7th Framework Program

TIMBRE: Tailored Improvement of Brownfield Regeneration in Europe, funded by the European 7th Framework Programme (2011-2014, contract no 265364)

CLIMRUN: Climate Local Information in the Mediterranean region: Responding to User Needs, funded by the European 7th Framework Programme (2011-2014, project ID 265192)

GLOCOM: Global Partners in Contaminated Land Management, funded by the European 7th FP PEOPLE, Marie Curie IRSES and coordinated by Ca' Foscari University – Prof. Marcomini (2011-2015, contract No. 269233)

NANOFORART: NANO-materials FOR the conservation and preservation of movable and immovable ARTworks (2011 – 2014) funded by the European 7th Framework Programme

• Dates (from – to)	From 1992 to 2000
• Name and address of employer	Department of Environmental Sciences - University Ca' Foscari Venice Calle Larga, S. Marta 2137 - 30123, Venice (Italy)
• Type of business or sector	Academy
• Occupation or position held	Associate professor of Applied Chemistry
• Dates (from – to)	From 1985 to 1987
• Name and address of employer	ETH-Polytechnic of Zurich, Institute for Water Science and Technology (EAWAG), Duebendorf (Switzerland)
Type of business or sector	Research Institute
• Occupation or position held	Research Associate

- Dates (from – to)
- Name and address of employer
 - Type of business or sector
 - Occupation or position held

1984-1992
Ca' Foscari University of Venice (Italy)
Academy
Researcher, Assistant Professor

- Dates (from – to)
- Name and address of employer
 - Type of business or sector
 - Occupation or position held

1982-1984
Lash Miller Chemical Institute, University of Toronto (Canada)
Research Institute
Post doctoral fellow

EDUCATION AND TRAINING

- Dates
- Name and type of organisation providing education and training
 - Title of qualification awarded

1984
University of Padua (Italy)

Specialization Degree in Nuclear Chemistry

- Dates
- Name and type of organisation providing education and training
 - Title of qualification awarded

1976-1981
University of Padua (Italy)

Degree in Chemistry

PERSONAL SKILLS AND COMPETENCES

Acquired in the course of life and career but not necessarily covered by formal certificates and diplomas.

More than 30 years of experience in environmental chemistry, especially pollution chemistry (determination and monitoring of priority and emerging pollutants, including nanomaterials, in waters/wastewaters, soil, air and biota), environmental impact assessment and management (development and implementation of environmental quality standards for chemicals; hazard and risk assessment of chemicals); transport and fate of chemicals under current and future (climate affected), conditions. In some more detail: Antonio Marcomini started his research activity as inorganic-metallorganic chemist and then moved soon to environmental chemistry in the context of environmental sciences. His research activity focused on the analysis (i.e. structural identification and quantification) and environmental behaviour (i.e. occurrence, transformation, ultimate fate) of chemicals and particles (especially engineered nanomaterials, ENM) in environmental and biological media, and on qualitative and quantitative estimation of environmental risks and impacts resulting from the environmental occurrence of chemical and non-chemical stressors. Scientific achievements were obtained by developing original methods, novel methodologies and new applications. Both experimental and modelling approaches were used to explain and predict the environmental behaviour of key chemical stressors (e.g. endocrine disrupting compounds, EDC, aromatic surfactants, persistent organic pollutants, i.e. (PCBs, PAHs, Dioxins) under past (from dated samples), actual (from contemporary samples), and future (from thermodynamic models) conditions. The developed knowledge allowed to support (eco)toxicologists to understand the mode of action of intriguing substances (e.g. EDC, ENM) on living organisms, and to link environmental occurrence of pollutants with human and non-human health endpoints. The overall obtained results, together with literature results, were used to develop environmental risk assessment of chemical pollutants and engineered nanoparticles. Both human health and ecological risk assessment were addressed, by applying conventional (deterministic) and non-conventional (probabilistic) methods for the risk estimation at different spatial scales (local to regional). Prioritization and ranking of chemical and non-chemical stressors according to hazard potential, and sources-pathways-targets distribution, were attained by regionalizing the environmental risk. Methodological innovation was introduced by using methods (e.g. weight of evidence) derived from multicriteria decision analysis (MCDA) to integrate different classes of data (chemical, biological, toxicological, hydromorphological data) to assess environmental quality of natural resources (e.g. natural waters, especially coastal waters). MCDA derived methods (i.e. fuzzy analysis) were also used to develop the environmental risk assessment of engineered nanoparticles by addressing uncertainty resulting from the tremendous knowledge gap between known exposure-effects data and increasing number of nanomaterials. Special attention was addressed to investigating the nutrients cycling and the eutrophication (i.e. primary and secondary productions) in the lagoon of Venice, and the effects of algal biomass growth and decay on the cycling of nitrogen and phosphorous compounds, and on the

environmental quality resulting from chemical pollutants.

The overall developed methodologies and procedures used for environmental risk assessment were linked to the decision making triggered by regulations on natural waters and contaminated soils (e.g. water framework directive) and management strategies (e.g. rehabilitation of degraded land). Four risk-based Decision Support Systems (DSS) were developed for assessing and managing human and ecological risks resulting from contaminated sites, river basin pollution, and climate change impacts.

On the side of international cooperation, since the year 2004, Antonio Marcomini and its group developed a collaboration with the Chinese Academy of Environmental Sciences (CRAES). CRAES belongs to the Chinese Ministry of the Environmental Protection (MEP) and is committed by the Chinese government to do environmental research, to support the Chinese government in formulating and implementing environmental legislation and regulations, and to support peripheral governments (the counties) and environmental protection agencies in the environmental assessment and management. Two European Marie Curie IRSES projects (start: July 2011, duration: 4 years) were recently funded to support the transfer of European environmental best practices, training and exchange of people. Over the last three years, a collaboration program with Russia in the field of environmental research was also undertaken by coordinating the cooperation project E-URAL and Marie Curie IRSES Econanosorb project (2012).

MOTHER TONGUE

ITALIAN

OTHER LANGUAGES

- Reading skills
- Writing skills
- Verbal skills

ENGLISH

Excellent
Excellent
Excellent

GERMAN

Good
Good
Sufficient

**TECHNICAL SKILLS
AND COMPETENCES**

*With computers, specific kinds of
equipment, machinery, etc.*

Expert use of advanced analytical techniques such as High Performance Liquid Chromatography (HPLC) coupled with UV, fluorescence detectors, and Mass Spectrometry (Quadrupole, Ion Trap, High Resolution Time of Flight), Gas Chromatography (GC) coupled with FID and MS detectors, Pyrolysis- Gas Chromatography (Py-GC), Flow Field Fractionation (FFF), Hydro Dynamic Chromatography (HDC), Dynamic Light Scattering (DLS), Analytical Photocentrifuge.

Advanced experience in analytical methods development, by solid-phase extraction (SPE), HPLC-UV/fluorescence, HPLC-MS and HPLC-MS-MS, for the determination of organic microcontaminants and pollutants (endocrine disrupters, pharmaceuticals and personal care products, sulfonates, surfactants, polycyclic aromatic hydrocarbons) and their biointermediates in environmental samples, both liquid (fresh water, sea water, underground water, final effluents from sewage treatment plants, drinking water, biological fluids) and solid (soil, sediment, organisms).

Advanced experience in the physical and chemical characterization of engineered nanomaterials and nanoparticles in complex matrices such as biological fluids and tissues, and environmental samples.

Design, development and implementation of Decision Support Systems (DSS) for risk assessment and requalification of contaminated sites, water resources assessment and management, impact of natural and climate change hazards: DESYRE, MODELKEY, SYRIADE and DESYCO.

ADDITIONAL INFORMATION

Winner of the Arnaldo Liberti medal awarded jointly by the Division of Environmental Chemistry and the Division of Analytical Chemistry of the Italian Society of Chemistry (2015)

Winner of the 2012 Ca' Foscari University of Venice "Premio alla Ricerca" (Research Award) for senior researchers

Director of the International Autumn School on Nanosafety, Venice – Italy (2009-2013)

Member of the Editorial Board of Environmental Sciences (since 2004), Environment System and Decision (since 2013), and Nanomaterials (since 2017)

National Delegate and member of the Scientific Committee of the EuChems Conferences ICCE 2011 (Zurich), ICCE 2013 (Barcelona), ICCE 2015 (Leipzig), ICCE 2017 (Oslo)

Dean of the Consorzio Venezia Ricerche (www.veneziaricerche.it) (2000-2013)

Dean of the Science & Technology Park of Venice (2003-2006)

Vice-Rector for Research Policy & Management at Ca' Foscari University (2006-2008)

Member of the Steering Committee and Strategic Council of the Euromediterranean Center for Climate Change (CMCC, www.cmcc.it) (since 2006)

Member of the American Chemical Society (ACS)

Member of the international Society of Environmental Chemistry and Toxicology (SETAC)

Member of the Italian Chemistry Society (SCI)

Director of the university masters REACH - Registration, Evaluation, Authorisation and restriction of Chemical substances), 2009-2012; and Characterization and Rehabilitation of Contaminated Sites, 2017 on.