

CURRICULUM VITAE

PERSONAL INFORMATION

Name: **PASSANANTI, Monica**

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CURRENT POSITIONS

2022 - present Associate Professor, INAR, University of Helsinki (UH), Finland

2021 - present Associate Professor, Department of Chemistry, University of Turin (UNITO), Italy

PREVIOUS POSITIONS

2019 - 2021 Assistant Professor (RTD-B), Department of Chemistry, University of Turin (UNITO), Italy

2022 University Researcher, INAR, University of Helsinki (UH), Finland

2016 - 2022 Post-doc, INAR, University of Helsinki (UH), Finland

2014 - 2015 Post-doc, IRCELYON, CNRS (French National Center for Scientific Research), France

2013 - 2014 Post-doc, ICCF, Université Blaise-Pascal, France

EDUCATION

2013 PhD in Chemical Science, Department of Chemistry, University of Naples Federico II, Italy
Title: Xenobiotics in the environment: an investigation on the transformation kinetics, the environmental metabolites and their formation mechanisms.

Supervisor: Prof. Maria Rosaria Iesce

2009 Master degree in Chemistry (110/110 cum laude), Department of Chemistry, University of Naples Federico II (UNINA), Italy

2008 Bachelor degree in Chemistry (110/110 cum laude), Department of Chemistry, University of Naples Federico II (UNINA), Italy

RESEARCH FUNDING AND PROJECTS

2022 - 2027 MUR Bando FARE Ricerca in Italia. Project title: *NATtA - An investigation on the impact of nanoplastics on freshwater and wastewater treatments* (Role: Principal Investigator)

2021 - 2026 ERC Starting grants. Project title: *NaPuE - Impact of Nanoplastics Pollution on aquatic and atmospheric Environments* (Role: Principal Investigator)

2021 - 2023 Fondazione CRT - Erogazioni ordinarie. Project title: *Studio dell'impatto ambientale di microplastiche e nanoplastiche in acque reflue e in acque superficiali* (Role: Principal Investigator)

2020 - 2022 Bando Galileo 2020 - Università Italo Francese. Grant for supporting scientific cooperation between Italy and France. Project title: *Towards an efficient treatment and valorization of plastic waste nanoparticles: Hydrogen production by plastic electrolysis* (Role: Principal Investigator for the Italian partner)

2019 - 2021 Three-year research grant of the University of Helsinki. Project title: *Nanoplastics in the environment: the big impact of the very small* (Role: Principal Investigator)

2019 EUROCHAMP-2020 TNA (Transnational Access), access to simulation chamber ISAC, France. Project title: *Photoreactivity of nanoplastics in the aquatic environment* (Role: Principal Investigator)

2018 - 2019 Access to Swiss Light Source (SLS) beamline (Synchrotron facilities), Paul Scherrer Institut (PSI), Switzerland. Project title: *Insight into chemical changes during nanoplastics degradation in aquatic environment* (Proposals ID: 20180904 - 2018 and 20190883 - 2019) (Role: Principal Investigator)

SCIENTIFIC PRODUCTION

Publications: 41 articles in international peer-reviewed journals (8 as first author, 2 as co-first author and 7 as last or corresponding author), including 1 in *Science*, 1 in *Angew. Chem.* (as first author), 1 in *J. Am. Chem. Soc.*, 1 in *Proc. Nat. Acad. Sci.* and 1 in *Sci. Adv.*

H-index 21, with 1153 citations (Source: Scopus, 20/12/2022).

Conferences: 26 scientific presentations at national and international conferences, 17 of them were oral presentations and 9 poster presentations.

Selected invited oral presentations and seminars:

- 2022 “Reactivity and analysis of nanoplastics and small microplastics”, *International Conference on Microplastic Pollution in the Mediterranean Sea (μMED)*, 25-28 September, Naples, Italy (Invited speaker)
- 2021 “Ruolo della luce: dalla sintesi ecocompatibile alla chimica dell’ambiente”, *XVIII convegno nazionale sulle reazioni pericicliche e sintesi di etero e carbocicli*, 28-29 October, Florence, Italy (Invited speaker)
- 2020 “NaPuE – Impact of Nanoplastics Pollution on aquatic and atmospheric Environments”, *Inauguration of the academic year 2020/2021 of the Department of Chemistry, University of Turin*, Italy (Invited seminar)
- 2020 “Nanoplastics in the environment: an invisible problem?” *SCI Giovani Award Ceremony 2020*, online (Invited speaker)
- 2018 “What do we know about plastic pollution? Micro and nanoplastics in the environment”, *Paul Scherrer Institute, Switzerland* (Invited seminar)
- 2018 “Key components in new particle formation: sulfuric acid clusters with guanidine and diamines” *The 677 WE-Heraeus-Seminar: Towards a Molecular Understanding of Atmospheric Aerosols*, 26-31 August, Bad Honnef, Germany (Hot Topic Talk)

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

- 2019 – present 2 master students, 1 bachelor student and 1 PhD student, 1 Research assistant, 1 Post-doc, Department of Chemistry, UNITO, Italy
- 2016 – present 1 master student, 1 summer worker and 1 on-going PhD student, 2 Post-docs INAR, UH, Finland
- 2013 – 2014 1 master student and 1 PhD student, ICCF, Université Blaise-Pascal, France
- 2010 – 2013 4 master students and 3 bachelor students, Department of Chemistry, University of Naples Federico II, Italy

TEACHING ACTIVITIES

- 2022 – 2023 Teacher (course leader) – Basics of Thermophysics (Bachelor degree in Science), Faculty of Science, Department of Physics, UH, Finland
- 2020 – 2023 Teacher (course leader) – Environmental Chemistry (Master degree in Science of Natural Systems), Department of Life Sciences and Systems Biology, UNITO, Italy
- 2020 – 2023 Teacher (course leader) – Environmental Chemistry (Master degree in Environmental monitoring, protection and remediation), Earth Science Department, UNITO, Italy
- 2019 – 2020 Teacher – Analytical Chemistry with Laboratory, Department of Chemistry, UNITO, Italy
- 2019 and 2023 Supporting lectures – Mass Spectrometry in Atmospheric Sciences, INAR, UH, Finland
- 2018 – 2019 Teacher – Leadership for sustainable change, INAR, UH, Finland
- 2017 – 2018 Teacher assistant for 2 years – Winter School "Atmospheric Processes and Feedbacks and Atmosphere-Biosphere Interactions, INAR, UH, Finland
- 2010 – 2013 Teacher, laboratory and exam assistant (Integrated didactic activities)– Chemistry and Organic Chemistry, Department of Chemistry, University of Naples Federico II, Italy
- 2006 – 2007 Laboratory assistant (Collaboration for didactic activities, Call 2005/2006) – General Chemistry, Department of Chemistry, University of Naples Federico II, Italy

PEDAGOGICAL TRAININGS

- 2021 – 2022 University Pedagogy 2.2 - Assessment of learning and giving feedback, University of Helsinki, Helsinki, Finland. Grade 5/5

- 2020 – 2021 Quality teaching in presence and at a distance, evaluation and inclusion. Project IRIDI START, UNITO, Turin, Italy.
- 2018 – 2018 University Pedagogy 1 - Learning in Higher Education, University of Helsinki, Helsinki, Finland. Grade 5/5

ORGANISATION OF SCIENTIFIC MEETINGS

- 2022 Member of the organizing committee for the “XIX Congresso Nazionale della Divisione di Chimica dell'Ambiente e dei Beni Culturali” in Turin, Italy, 20-23 June 2022, 150 participants
- 2019 Member of the scientific committee for the “International conference on Applications of Multi-scale Approaches in Environmental chemistry (AMARE 2019)” in Rennes, France, 23-25 April 2019, 100 participants
- 2018 Member of the organization committee for the conference “Mathematics for Atmospheric-Biospheric Science 2018” in Hyytiälä, Finland, 26-29 September 2018, 40 participants
- 2017 Member of the organization committee for the conference “Mathematics for Atmospheric-Biospheric Science 2017” in Levi, Finland, 20-24 November 2017, 60 participants

AWARDS and QUALIFICATIONS

- 2021 National Scientific Qualification (ASN) to function as Full Professor in environmental chemistry by the Italian Ministry of Education, University and Research (MIUR)
- 2020 Docent in Atmospheric Science assigned by the Chancellor of the University of Helsinki, Finland.
- 2014 Premio Giacomino Randazzo 2013 (best PhD thesis in chemical sciences), Italian Chemical Society (SCI), Italy

REVIEWING ACTIVITIES

- 2019 – present Proposal reviewer (Scientific Expert) for the National Scientific Foundation (NSF), USA and for Generic Call, National Research Agency-ANR (France) and Università Italo Francese
- 2013 – present Reviewer for international scientific journals (e.g., PNAS, Chemosphere, Catal. Today, J. Chem. Technol. Biot., Free Radical Bio. Med.)

PUBLIC ENGAGEMENT ACTIVITIES

- 21/12/2022 Interview for University of Helsinki News
- 1/10/2022 Photo exhibition on plastic pollution for the European Researchers' Night at UNITO, Turin, Italy (Project creator and organizer)
- 25/11/2021 Interview for Research Professional News
- 24/09/2020 Video interview for the *European Biotech Week*.
- 24/09/2020 Video for EU Corner – MEETmeTONIGHT Faccia a faccia con la ricerca
- 08/09/2020 Podcast, interview for Unito News
- 05/09/2020 Interview for Radio Rai GR1
- 27/09/2019 Institut français de Finlande, Helsinki, “Degradation of nano- and microplastics in the environment” scientific divulgation for the European Researchers' Night (in French).

SELECTED COLLABORATIONS

- 06/2018 Visiting researcher, Department of Chemistry, Stony Brook University, Stony Brook, USA.
Contact person: Prof. Christopher Johnson
- 05/2018 Visiting researcher, School of Engineering and Technology Mechanical Engineering, Purdue University, Indianapolis, USA.
Contact person: Prof. Carlos Larriba Andaluz

SHORT BIBLIOGRAPHY

Associate Professor at the University of Turin in Italy and at the University of Helsinki in Finland. In 2013 she got her PhD degree at the University of Naples Federico II on the photodegradation of pollutants in surface waters. After the PhD she worked as post-doc at the ICCF in Clermont-Ferrand, Université Blaise Pascal (France) and lately at the CNRS, IRCELYON in Lyon (France).

In this period, her scientific interest moved to the atmospheric science, studying the chemical heterogeneous reactions in the environment (seawater-atmosphere exchanges and air-solid reactions).

Since 2016 she is working at the University of Helsinki (UHEL, INAR). She started to work as post-doc for an ERC-AdG project about the study and modelling of clusters detection in the atmosphere, but after few years, she started her own project, and she opened a completely new research line on the fate of nanoplastics in the environment. She obtained funding from the University of Helsinki to develop this research topic and later funding from the European Research Council (ERC-StG) for the project NaPuE. She is working at the University of Turin since 2019 and she is supervising national and international research projects on the environmental impact of micro- and nanoplastics. She is actually working between the University of Turin and the University of Helsinki, promoting international collaboration between scientific institutions.