Curriculum vitae

Marco Paglione

Personal data

date of birth	30 June 1984
nationality	Italian
address (residence)	via De Turre, 47 – 66100 Chieti, Italy
(work)	CNR-ISAC, Via Gobetti, 101 – 40129 Bologna, Italy
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Academic Achievements

2013 **PhD in Environmental Sciences** at "Alma Mater Studiorum" University of Bologna, Italy.

Doctoral thesis: "Advanced spectroscopic techniques and chemometric analysis for atmospheric organic aerosol characterization and source apportionment".

Supervisors: Dr. Stefano Decesari (ISAC-CNR) and Prof. Emilio Tagliavini (University of Bologna).

2008 **Master's Degree in Environmental Sciences at** "Alma Mater Studiorum" University of Bologna, Italy.

Master thesis: "Spectroscopic investigations on environmental aerosol". Supervisors: Prof. Emilio Tagliavini and Dr. Fabio Moretti (University of Bologna).

Passing mark: 110/110 cum laude

2006 **Bachelor's Degree in Environmental Sciences** at University of L'Aquila, Italy.

Bachelor thesis: "Ozone and Radon measurements in the superficial layer of atmosphere. Correlation with meteorological parameters".

Supervisors: Prof. Giovanni Pitari and Dr. Piero Di Carlo (University of L'Aquila)

Passing mark: 110/110 cum laude

Post-doctoral research fellows

15/06/2018-ongoing	Post-doc fellow at the Institute of Chemical Engineering Sciences, Foundation of Research and Technology - Hellas, (FORTH/ICE-HT), Patras, Greece.
15/04/2013-15/04/2018	Post-doc fellow at the Institute of Atmospheric Sciences and Climate of the National Research Council of Italy (ISAC-CNR), Bologna, Italy.
02/01/2013-02/05/2013	Term contract at University of Urbino "Carlo Bo", on the identification of halogenated greenhouse gases emission profiles in atmosphere for improving their characterization and source apportionment, Urbino, Italy.

Participation in Research projects

2017-ongoing	**PyroTRACH - Pyrogenic Transformations Affecting Climate and Health (H2020-EU.1.1. - EXCELLENT SCIENCE - ERC).**
2018-ongoing	**EUROCHAMP-2020, European network of atmospheric simulation chambers development** Personal participation to the experiments carried out at the FORTH-ASC indoor smog chamber.
2017-ongoing	**COLOSSAL - Chemical On-Line cOmpoSition and Source Apportionment of fine aerosol (COST Action CA16109).** Personal participation to WG1 (Quality assurance of on-line chemical composition of NR on-line fine aerosol measurements) and WG2 (Source apportionment of OA).
2015-ongoing	**ACTRIS-2 - Aerosols, Clouds, and Trace gases Research InfraStructure (H2020-INFRAIA-2014-2015).** Personal participation to the Mount Cimone and Po Valley field campaign in July 2017 with on-line and off-line aerosol measurements.
2015-2017	**Air-Sea Lab CNR Joint Lab Project**: collaboration between CNR-ISAC and the Centre for Climate & Air Pollution Studies, National University of Ireland (C-CAPS - NUI), Galway. Study of the aerosol physic-chemical properties at costal environments focusing in particular on air-sea exchanges, aerosol-clouds interactions and air pollution-climate interactions. Personal participation to field campaigns with HR-TOF-AMS on-line measurements and filter sampling for off-line aerosol chemical characterization and data analysis.
2013-2017	**BACCHUS – Impact of Biogenic versus Anthropogenic emissions on Clouds and Climate: towards a Holistic UnderStanding (FP7-ENV-2013-two-stage, PR 603445)** Understanding the impact of aerosol on clouds and climate. Personal participation to the August 2015 field campaign at Mace Head (Ireland) with HR-TOF-AMS on-line aerosol measurements, fluxes with Eddie Covariance techniques and filter sampling of aerosol and Ice Nuclei (IN).

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2013-2015	**PEGASO – Plankton-derived Emission of trace Gases and Aerosols in the Southern Ocean** Funding agency: MINECO (CTM2012-37615, 230,000 euro). Project coordinator: Rafel Simó, Institut de Ciències del Mar (ICM-CSIC), Spain. Study of the ocean biological activity impact on marine aerosol chemical composition and its influence on climate. Personal participation to the 6 weeks long oceanographic cruise (January - February 2015) in the regions of Antarctic Peninsula, South Orkney and South Georgia Islands. Sampling of ambient aerosols and sea-spray generated by deliberate bubbling of the sea-water. Coordination of the collaboration between ISAC-CNR and ICM-CSIC (R. Simo; M. Dall'Osto).
2011-2014	**PEGASOS – Pan-European Gas-Aerosol-Climate Interaction Study (FP7-ENV-2010, PR 265148)** European project (FP7) focusing on air-pollution and climate-change interactions on regional and global scale. Personal participation to the 1 month field campaign carried out in parallel at Bologna (urban site), San Pietro Capofiume (Rural site) and Mount Cimone (remote mountain site) in Po Valley, Italy during June-July 2012. Field activities, laboratory chemical analyses, data elaborations and basic application of a chemical transport model (PMCAMx).
2011-2015	**SUPERSITO Project** italian project funded by Emilia-Romagna Region (DRG n. 428/10 and 1971/2013). Integrated study of particulate matter (PM) pollution in Po Valley, Italy, and its effects on human health. Personal participation to the 8 intensive field campaigns carried out at Bologna (urban site), San Pietro Capofiume (Rural site) and Mount Cimone (remote mountain site) in Po Valley, Italy, during 2011-2014. Field activities, laboratory chemical analyses and data elaborations.
2007-ongoing	**FAIRMODE - Forum for air quality modelling in Europe** joint response initiative of the European Environment Agency (EEA) and the European Commission Joint Research Centre (JRC). Its aim is to bring together air quality modelers and users in order to promote the harmonized use of models by EU Member States. Personal participation to meetings and to the Source Apportionment intercomparison exercises.
2007-2010	**EUCAARI – European Integrated project on Aerosol Cloud Climate and Air Quality interactions** European project (FP6) investigating atmospheric aerosol effects on climate and air-quality with physic-chemical measurements, toxicological parameters and models application. Specific role in chemical analyses of aerosol samples collected during field campaigns in 8 different European sites. Statistical elaboration of chemical data with the aim of anthropogenic and biogenic European aerosol sources identification and characterization.

Field experience	
Capogranitola, Sicily, Italy	April-May 2016 field campaign at coastal site with HR-TOF-AMS on-line measurements and filter sampling of aerosol and Ice Nuclei (IN).

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Mace Head, Ireland	August 2015 field campaign with on-line aerosol measurements by HR-TOF-AMS, fluxes measurements with Eddie Covariance techniques and filter sampling of aerosol and Ice Nuclei (IN).
Southern Ocean, Shetland Islands and Antarctic Peninsula	Jan.-Feb. 2015 PEGASO 6 weeks long atmospheric-oceanographic cruise on board of the Spanish research vessel "BIO-Hesperides". Aerosol sampling and laboratory experiments of sea-water bubble bursting.
Mt. Cimone Observatory GAW station, Italy	participation to the monitoring activities and to several intensive field campaigns in the framework of different international projects.
Po Valley, Italy	participation in many (more than 10) intensive field campaigns (2011-2017) in the framework of several international projects at three sites: **Bologna** Supersite (urban background), **San Pietro Capofiume** (rural background) and **Mt. Cimone** (mountain remote site, GAW station).
International collaborations (see publications)	• **Kiendler-Scharr, Astrid** (Forschungszentrum Jülich, University of Cologne, Germany); • **Mensah, Amewu A.** (ETH Zürich, Dep. of Environmental Systems Science, Switzerland); • **Hillamo, Risto; Saarikoski, Sanna** (Finnish Meteorological Institute-FMI, Helsinki, Finland); • **Prévôt, André S. H.** (Paul Scherrer Institute-PSI, Switzerland); • **Worsnop, Douglas**; **Massoli, Paola**; **Lambe, Andrew T.** & **Canaragatna, Manjula** (Aerodyne research inc., Billerica, Boston, U.S.A.); • **O'Dowd, Colin**; **Ovadnevaite, Jurgita** & **Ceburnis Darius** (National University of Ireland Galway, Galway, Ireland); • **Harrison, Roy M.** & **Beddows, David C. S.** (University of Birmigham, Birmingham, United Kingdom); • **Dall'Osto, Manuel** & **Simo, Rafel** (Institut de Ciències del Mar, CSIC, Barcelona, Spain); • **Montero-Martínez, Guillermo** (Universidad Nacional Autónoma de México, Mexico City, Mexico).
Reviewer activity	• Atmospheric Research (4) • Atmosphere (2) • Atmospheric Chemistry and Physics (2) • Environmental Science&Technology (2) • Atmosferic Environment (1) • Advances in Metereology (1) • Scientific report (1) • Plos-One (1) • Air Quality, Atmosphere and Health (AIRQ) (1)

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Language skills

Mother tongue: Italian

Other languages	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
	CILTA (Interfaculty Center of Theoretical and Applied Linguistics), Bologna				
Spanish	A2	A2	A2	A2	A2

Levels: A1/A2: basic user - B1/B2: Independent user - C1/C2: Proficent user
Common European Framework of Reference for Languages

Computer skills

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
PROFICIENT USER	PROFICIENT USER	PROFICIENT USER	INDEPENDENT USER	INDEPENDENT USER

Levels: Basic User - Independent User - Proficient User
Digital Competences - Self-Assessment Grid (Europass Criteria)

Other computer skills

- Matlab programming for geosciences. Application for data analysis (multivariate statistical tools) and data visualization (mapping).
- Linux and Fortran basic knowledge for models input and output handling.
- NOAA Hysplit trajectory program (Windows and Internet-based). Application for the analysis of archived and forecast backward and forward trajectories of the transport of atmospheric pollutants.

Technical skills

(Relevant for Atmospheric Chemistry)

Analytical and organic chemistry		
	Chromatographic techniques	-High Performance Liquid Chromatography (HPLC-UV) -Gas Chromatography – mass spectrometry (GC/MS) -Ion Chromatography (IC)
	Spectroscopic techniques	-Proton- and carbon- Magnetic Resonance Spectroscopy (^{1}H-NMR, ^{13}C-NMR) -Aerosol Mass Spectrometry (HR-TOF-AMS, ACSM)

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	Elemental analyses	-Carbon and Nitrogen analyzers for determination of bulk Total Carbon (TC), Total Organic Carbon (TOC) and Total Organic Nitrogen (TON) on both solid and liquid samples by high-temperature catalytic instruments
	Other (less experienced) techniques	UV-VIS, IR spectroscopies X-ray scattering techniques; Microscopia SEM
Chemiometric techniques for environmental data analysis	extensive knowledge and experience in the application of multivariate statistical analysis techniques to aerosol chemical composition data, including spectroscopic data (H-NMR and AMS), and atmospheric datasets in general.	Cluster Analysis (hierarchical and non-hierarchical methods); Principal Component Analysis (PCA); Factor Analysis (PMF, ME-2, N-NMF, MCR).

RESEARCH RESULTS INCLUDING PATENTS, PUBLICATIONS, TEACHING ETC.

Dr. Marco Paglione is a young atmospheric scientist/aerosol chemist, with specific experience in organic and analytical chemistry and chemometrics applied to environmental sciences. Since its starting his research was focused on the chemical characterization of atmospheric aerosol and especially of its organic fraction.

-During his Master's internship and thesis research at the University of Bologna (2008), he was trained in the analysis of ambient aerosol samples with proton-Nuclear Magnetic Resonance (H-NMR) spectroscopy learning this kind of very powerful technique of OA characterization.

-To continue his studies in atmospheric chemistry Marco obtained a PhD position at the University of Bologna in 2010, carrying out his research at the Institute of Atmospheric Sciences and Climate (ISAC) of the National Research Council (CNR) in Bologna, Italy. During his PhD the expertise of the candidate has expanded on the **determination of organic aerosol sources with receptor modeling techniques**. In this context he developed a novel application of **NMR-based chemometric methods** (cluster analysis, PCA, Factor analysis) **to atmospheric aerosol source apportionment**. The method was tested on chemical composition databases obtained from sample sets collected at both pristine and polluted environments in Europe, hence exploring the impact of a great diversity of natural and anthropogenic sources. During the PhD he also compared his H-NMR results with those from other techniques of organic aerosol characterization and source apportionment e.g. AMS. Marco PhD studies resulted in the completion of a well-organized and comprehensive thesis (defended on March 2013 at the University of Bologna), and the preparation of 2 first author articles and various other co-authorships on the organic aerosol source apportionment topic (see publications).

-After the PhD Dr Paglione obtained a post-doc position at CNR-ISAC and extended his expertise on AMS measurements and data analysis also thanks to a short training period at Aerodyne Research inc., Boston, USA in 2013 further improving his skills in organic aerosol analysis and source apportionment. At CNR-ISAC the candidate continued his work spreading his research activity on a wide range of atmospheric and climate-related issues: from the chemical characterization of organic aerosol to the study of air quality and climate interaction, through the analysis of the ocean-atmosphere exchanges and aerosol-cloud interactions. This thanks to the participation in national and international projects in which he established several research contacts with internationally renowned scientists and institutions. He participated in many field campaigns measuring aerosol (offline and online) in different regions of the world (from the north Atlantic to Antarctica) and over different platforms (mobile labs, oceanographic vessels, towers, etc.), which was reflected as a co-authorship in 21 scientific papers already published on peer-reviewed journals.

In his work, he often dealt with Secondary Organic Aerosol (SOA) trying to apportion its main sources and its formation and transformation pathways. Particularly relevant were the studies conducted on **biomass burning OA (bb-OA) fresh and processed fractions** identification in ambient, and especially those on fog scavenging and aqueous processing of winter OA ambient components. These works leaded to the evidence of a very important role of bb-OA processing and to the identification of **bb-aqSOA formation in ambient aerosol of Po Valley, Italy**, during winter-time, as reported in the recent *PNAS* coauthored publication (2016).

With the purpose of SOA formation and transformation comprehension he participated also in **laboratory and chamber experiments of biogenic and anthropogenic emissions oxidation** and analyzed the resulting SOA chemical features with different techniques (H-NMR, TOC/TN, HR-TOF-AMS, etc.) identifying specific characteristics of the different sources and comparing those with ambient data (e.g., *Atmos.Chem.Phys.*, 2017).

In 2015 the proponent participated to an **Antarctic expedition** in the framework of a Spanish project (PEGASO) regarding **ocean-atmosphere exchanges and marine aerosol chemical characterization** and sources identification over biological active water of the Southern Ocean. This experience leaded to important evidences that the microbiota of sea ice is a previously unknown significant source of atmospheric organic nitrogen, including low molecular weight alkyl-amines. These results (recently published on *Scientific Report*) shed new light on **marine SOA biological sources** and on their role in the carbon and nitrogen biogeochemical cycle.

The candidate during his post-doc activity contributed in training and mentoring the activity of PhD students (4) and MS students (2) in the CNR-ISAC laboratories. He was also involved in the activity of Science Dissemination and Communication carry out by the CNR and not only, to broaden scientific information to the general public. For this purpose he participated in many educational and science-communication festivals and events (e.g., European Researcher's nights - http://ec.europa.eu/research/researchersnight/index_en.htm (6 times), Genoa Science Festivals - http://www.festivalscienza.eu (twice), Italian Meteorology festivals (3 times), etc.), developing a variety of fun-learning activities, from hands-on experiments, to videos, posters and booklets, and participating also as invited speaker to a TV science-communication show on the Italian National TV (RAI-1, Geo&Geo).

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PUBLICATIONS

ISI-Web of Science, Citation report February 2018:

Sum of the Times Cited: 242 (without self-citations: 212)
Citing Articles: 181 (without self-citations: 166)
Average Citations per Item: 8.31
h-index: 11

1. Brege, M., **Paglione, M.**, Gilardoni, S., Decesari, S., Facchini, M. C., and Mazzoleni, L. R.: Molecular insights on aging and aqueous phase processing from ambient biomass burning emissions-influenced Po Valley fog and aerosol, Atmos. Chem. Phys. Discuss., https://doi.org/10.5194/acp-2018-301, in review, 2018.
2. Meroni, A., Pirovano, G., Gilardoni, S., Lonati, G., Colombi, C., Gianelle, V., **Paglione, M.**, Poluzzi, V., Riva, G.M., Toppetti, A.: Investigating the role of chemical and physical processes on organic aerosol modelling with CAMx in the Po Valley during a winter episode – *Atmos. Env.,171, 126-142, 2017.* **IF 3.948**
3. Rinaldi, M., Santachiara, G., Nicosia, A., Piazza, M., Decesari, S., Gilardoni, S., **Paglione, M.**, Cristofanelli, P., Marinoni, A., Bonasoni, P., Belosi, F.: Atmospheric Ice Nuclei Particle measurements at the high mountain observatory Mt. Cimone (2165 m a.s.l., Italy) – *Atmos. Env.,171, 173-180, 2017.* **IF 3.948**
4. Zanca, N., Lambe, A. T., Massoli, P., **Paglione, M.**, Croasdale, D. R., Parmar, Y., Tagliavini, E., Gilardoni, S., and Decesari, S.: Characterizing source fingerprints and ageing processes in laboratory-generated secondary organic aerosols using proton-nuclear magnetic resonance (^{1}H-NMR) analysis and HPLC HULIS determination, Atmos. Chem. Phys., 17, 10405-10421, 2017. **IF 5.896**
5. Dall'Osto M., Ovadnevaite J., **Paglione M.**, Beddows D.C.S., Ceburnis D., Cree C., Cortés P., Zamanillo M., Nunes S.O., Pérez G.L., Ortega-Retuerta E., Emelianov M., Vaqué D., Marrasé C., Estrada M., Montserrat Sala M., Vidal M., Fitzsimons M.F., Beale R., Airs R., Rinaldi M., Decesari S., Facchini M.C., Harrison R.M., O'Dowd C., Simó R.: Antarctic sea ice region as a source of biogenic organic nitrogen in aerosols, Scientific Reports 7, Article number: 6047, doi:10.1038/s41598-017-06188-x, 2017. **IF 4.847**
6. Abbondanzi F., Biscaro G., Carvalho G., Favaro L., Lemos P., **Paglione M.**, Samorì C., Torri C.: Fast method for the determination of short-chain-length polyhydroxyalkanoates (scl-PHAs) in bacterial samples by In Vial-Thermolysis (IVT), New Biotechnology, ISSN 1871-6784, 2017. **IF 3.24**
7. Pietrogrande M.C., Barbaro E., Bove M.C., Clauser G., Colombi C., Corbella L., Cuccia E., Dalla Torre S., Decesari S., Fermo P., Gambaro A., Gianelle V., Ielpo P., Larcher R., Lazzeri P., Massabò D., Melchionna G., Nardin T., **Paglione M.**, Perrino C., Prati P., Visentin M., Zanca N., Zangrando R.: Results of an interlaboratory comparison of analytical methods for quantification of anhydrosugars and biosugars in atmospheric aerosol, Chemosphere, Volume 184, Pages 269-277, 2017. **IF 4.506**
8. Costabile, F., Gilardoni, S., Barnaba, F., Di Ianni, A., Di Liberto, L., Dionisi, D., Manigrasso, M., **Paglione, M.**, Poluzzi, V., Rinaldi, M., Facchini, M. C., and Gobbi, G. P.: Characteristics of brown carbon in the urban Po Valley atmosphere, Atmos. Chem. Phys., 17, 313-326, 2017. **IF 5.626, cit. 6**
9. Gilardoni, S., Massoli, P., **Paglione, M.**, Giulianelli, L., Carbone, C., Rinaldi, M., Decesari, S., Sandrini, S., Costabile, F., Gobbi, G.P., Pietrogrande, M.C., Visentin, M., Scotto, F., Fuzzi, S., Facchini, M.C.: Direct observation of aqueous secondary organic aerosol from biomass burning emissions, Proc. Natl. Acad. Sci. USA, 113, 10013–10018, 2016. **IF 10.285, cit. 30**

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10. Sandrini, S., van Pinxteren, D., Giulianelli, L., Herrmann, H., Poulain, L., Facchini, M. C., Gilardoni, S., Rinaldi, M., **Paglione, M.**, Turpin, B. J., Pollini, F., Zanca, N., and Decesari, S.: Size-resolved aerosol composition at an urban and a rural site in the Po Valley in summertime: implications for secondary aerosol formation, Atmos. Chem. Phys., 2016. **IF 5.896, cit. 7**
11. Sullivan, A. P., Hodas, N., Turpin, B. J., Skog, K., Keutsch, F. N., Gilardoni, S., **Paglione, M.**, Rinaldi, M., Decesari, S., Facchini, M. C., Poulain, L., Herrmann, H., Wiedensohler, A., Nemitz, E., Twigg, M. M., and Collett Jr., J. L.: Evidence for ambient dark aqueous SOA formation in the Po Valley, Italy, Atmos. Chem. Phys., 16, 8095-8108, 2016. **IF 5.896, cit. 7**
12. Dall'Osto, M., **Paglione, M.**, Decesari, S., Facchini, M.C., O'Dowd, C., Plass-Duellmer, C., and Harrison, R.M.: On the Origin of AMS "Cooking Organic Aerosol" at a Rural Site, Environmental Science & Technology, 49 (24), 13964-13972, 2015. **IF 6.96, cit. 4**
13. Rinaldi, M., Gilardoni, S., **Paglione, M.**, Sandrini, S., Fuzzi, S., Massoli, P., Bonasoni, P., Cristofanelli, P., Marinoni, A., Poluzzi, V., and Decesari, S.: Organic aerosol evolution and transport observed at Mt. Cimone (2165 m a.s.l.), Italy, during the PEGASOS campaign, Atmos. Chem. Phys., 15, 11327-11340, 2015. **IF 5.896, cit. 6**
14. Decesari, S., Allan, J., Plass-Duelmer, C., Williams, B. J., **Paglione, M.**, Facchini, M. C., O'Dowd, C., Harrison, R. M., Gietl, J. K., Coe, H., Giulianelli, L., Gobbi, G. P., Lanconelli, C., Carbone, C., Worsnop, D., Lambe, A. T., Ahern, A. T., Moretti, F., Tagliavini, E., Elste, T., Gilge, S., Zhang, Y., and Dall'Osto, M.: Measurements of the aerosol chemical composition and mixing state in the Po Valley using multiple spectroscopic techniques, Atmos. Chem. Phys., 14, 12109-12132, 2014. **IF 5.896, cit. 16**
15. Montero-Martínez, G., Rinaldi, M., Gilardoni, S., Giulianelli, L., **Paglione, M.**, Decesari, S., Fuzzi, S., Facchini, M.C., On the water-soluble organic nitrogen concentration and mass size distribution during the fog season in the Po Valley, Italy, Science of The Total Environment, Volumes 485–486, 1 July 2014, Pages 103-109, 2014. **IF 5.102, cit. 6**
16. Carbone, C., Decesari, S., **Paglione, M.**, Giulianelli, L., Rinaldi, M., Marinoni, A., Cristofanelli, P., Didiodato, A., Bonasoni, P., Fuzzi, S., Facchini, M.C., 3-year chemical composition of free tropospheric PM1 at the Mt. Cimone GAW global station – South Europe – 2165 m a.s.l., Atmospheric Environment, Volume 87, April 2014, Pages 218-227, 2014. **IF 3.841, cit. 13**
17. Gilardoni, S., Massoli, P., Giulianelli, L., Rinaldi, M., **Paglione, M.**, Pollini, F., Lanconelli, C., Poluzzi, V., Carbone, S., Hillamo, R., Russell, L. M., Facchini, M. C., and Fuzzi, S.: Fog scavenging of organic and inorganic aerosol in the Po Valley, Atmos. Chem. Phys., 14, 6967-6981, 2014. **IF 5.896, cit. 28**
18. **Paglione, M.**, Saarikoski, S., Carbone, S., Hillamo, R., Facchini, M. C., Finessi, E., Giulianelli, L., Carbone, C., Fuzzi, S., Moretti, F., Tagliavini, E., Swietlicki, E., Eriksson Stenström, K., Prévôt, A. S. H., Massoli, P., Canaragatna, M., Worsnop, D., and Decesari, S.: Primary and secondary biomass burning aerosols determined by proton nuclear magnetic resonance (1H-NMR) spectroscopy during the 2008 EUCAARI campaign in the Po Valley (Italy), Atmos. Chem. Phys., 14, 5089-5110, 2014. **IF 5.896, cit. 26**
19. **Paglione, M.**, Kiendler-Scharr, A., Mensah, A. A., Finessi, E., Giulianelli, L., Sandrini, S., Facchini, M. C., Fuzzi, S., Schlag, P., Piazzalunga, A., Tagliavini, E., Henzing, J. S., and Decesari, S.: Identification of humic-like substances (HULIS) in oxygenated organic aerosols using NMR and AMS factor analyses and liquid chromatographic techniques, Atmos. Chem. Phys., 14, 25-45, 2014. **IF 5.896, cit. 25**
20. Landi T. C., Curci G., Carbone C., Menut L., Bessagnet B., Giulianelli L., **Paglione M.** and Facchini M. C: Simulation of size-segregated aerosol chemical composition over northern Italy in clear sky and wind calm conditions, Atmospheric Research, Volumes 125–126, Pages 1-11, 2013. **IF 3.197, cit. 2**

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21. Finessi E., Decesari S., **Paglione M.**, Giulianelli L., Carbone C., Gilardoni S., Fuzzi S., Saarikoski S., Raatikainen T., Hillamo R., Allan J., Mentel Th.F., Tiitta P., Laaksonen A., Petäjä T., Kulmala M., Worsnop D.R., and Facchini M.C.: Determination of the biogenic secondary organic aerosol fraction in the boreal forest by NMR spectroscopy, Atmos. Chem. Phys., 12, 941-959, 2012. **IF 5.896, cit. 28**
22. Decesari S., Finessi E., Rinaldi M., **Paglione M.**, Fuzzi S., Stephanou E.G., Tziaras T., Spyros A., Ceburnis D., O'Dowd C., Dall'Osto M., Harrison R.M., Allan J., Coe H., Facchini M.C.: Primary and secondary marine organic aerosols over the north atlantic ocean during the map experiment, J.Geophys.Res.A, 2011. **IF 3.65, cit. 40**

PAPERS UNDER SUBMISSION / IN PREPARATION

- Paglione M., Gilardoni S., Decesari S., Zanca N., Rinaldi M., Sandrini S., Giulianelli L., Ferrari S., Poluzzi V., Facchini M.C., Fuzzi S., A multi-year characterization of chemical features, temporal-spatial distribution and transformation processes of organic aerosol in Po Valley, Italy, during SUPERSITO Project. *In preparation for Atmos. Chem. Phys.*

- Paglione M., Decesari S., Finessi E., Hillamo R., Carbone S., Saarikoski S., Raatikainen T., Dall'Osto M., O'Dowd C.D., Kiendler-scharr A., Mensah A., Baltensperger U., Prevot A., Kiss G., Alves C., Swietlicki E., Worsnop D.R., and Facchini M.C., Mapping Secondary Organic Aerosol formation and transformation processes by chemometric reduction of nuclear magnetic resonance (NMR) spectra from laboratory experiments and ambient aerosol samples collected at 8 european sites during the EUCAARI project. *In preparation for Atmos. Chem. Phys.*

CONFERENCES ABSTRACTS AND INVITED PRESENTATIONS (conferences all attended personally)

- 25 contributions (7 oral + 18 poster presentations) to national/international conferences.
- Best poster award at the PM2018 conference of the Italian Aerosol Society (IAS), 23-26 May 2018, Matera, Italy
- Invited poster presentation "Chemical characterization of submicron organic aerosol sources in Po Valley by advanced spectroscopic techniques (AMS and NMR) during the SUPERSITO project" at the 638 WE-Heraeus-Seminar on "Aerosol, Climate and Health", 27-31 March 2017, Bad Honnef, Germany.
- Invited talk "Primary and secondary biomass burning aerosols determined by factor analysis of H-NMR spectra" at Goldschimdt Conference, 25-30 August, 2013, Firenze, Italy.

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