Aims and methods of the study of atmospheric particles in the Arctic

CURRICUL VITAE

Fabio Giardi

Photo of the lecturer

1 Short CV

- Sep 2021 - Present: Research fellow
  National Institute for Nuclear Physics (INFN), Section of Florence, LABEC
  Standardization of the experimental procedures for IBA measurements and characterization of the elemental composition of aerosol samples for the needs of the Elemental Mass Calibration Center (EMC2) of ACTRIS European research infrastructure at LABEC
- Jun 2019 - Aug 2021: Research fellow
  University of Florence, Dept. of Physics and Astronomy
  Developments in Ion Beam Analysis for applications to the study of atmospheric particulates at the LABEC
- Nov 2016 - Oct 2017: Research fellow
  University of Florence, Dept. of Chemistry "Ugo Schiff"
  Determination of metals in atmospheric particulate through ICP-AES and ICP-MS techniques
- Mar - Jun 2013, Jun - Sep 2014, Feb - Jun 2015, Sep - Nov 2020: Station leader
  CNR, Arctic Station "Dirigibile Italia", Ny Ålesund, Svalbard Islands, Norway
  Sampling of arctic atmospheric particulate for chemical analysis and scientific research. Referent of the Arctic station manager and on-field support for Italian researchers
- Oct 2014 - Nov 2014: Research fellow
  University of Florence, Dept. of Chemistry "Ugo Schiff"
  Collaboration for the optimization of spectrograms obtained from ICP-MS and ICP-AES systems and processing of the data obtained, within the PATOS-2 project
- May 2011 - Mar 2013: School tutor
  "A. Ceri" Institute, Viale Piave, 18, 59100 Prato PO, Italy
  Lessons of scientific subjects (mathematics, physics and chemistry) to middle and high school students, with experience also in private tutoring since 2008

EDUCATION

- PhD in Chemical Sciences
  University of Florence, Dept. of Chemistry "Ugo Schiff"
  Thesis title: "Chemical and physical characterization for source apportionment of multi-year arctic aerosol records"

- Master's degree in Chemistry
  University of Florence, Faculty of Mathematical, Physical and Natural Sciences
  Curricula: Environmental and cultural heritage chemistry
- Bachelor's degree in Chemistry
  University of Florence, Faculty of Mathematical, Physical and Natural Sciences

2 Bibliometric data

SCOPUS: 26 publications; 392 citations; h-index 12

WoS: 25 publications; 380 citations; h-index 12

3 Selection of the 10 most relevant publications and/or patents

1. Udisti et al. (2016). Sulfate source apportionment in the Ny-Ålesund (Svalbard Islands) Arctic aerosol. Rendiconti Lincei, 27, 85–94. doi:10.1007/s12210-016-0517-7.
2. Lupi et al. (2016). Multi-seasonal ultrafine aerosol particle number concentration measurements at the Gruvebadet observatory, Ny-Ålesund, Svalbard Islands. Rendiconti Lincei, 27, 59–71. doi:10.1007/s12210-016-0532-8.
3. Giardi et al. (2016). Size distribution and ion composition of aerosol collected at Ny Ålesund in the spring-summer field campaign 2013. Rendiconti Lincei, 27, 47–58. doi:10.1007/s12210-016-0529-3.
4. Giardi et al. (2018). Determination of Rare Earth Elements in multi-year high-resolution Arctic aerosol record by double focusing Inductively Coupled Plasma Mass Spectrometry with desolvation nebulizer inlet system. Science of The Total Environment, 613-614C, 1284–1294. doi:10.1016/j.scitotenv.2017.09.247.
5. Lucarelli et al. (2020). Hourly Elemental Composition and Source Identification by Positive Matrix Factorization (PMF) of Fine and Coarse Particulate Matter in the High Polluted Industrial Area of Taranto (Italy). Atmosphere, 11(4), 419. doi:10.3390/atmos11040419.
6. Nava et al. (2020). Source Apportionment of PM2.5 in Florence (Italy) by PMF Analysis of Aerosol Composition Records. Atmosphere, 11(5), 484. doi:10.3390/atmos11050484.
7. Caiazzo et al. (2021). Carbonaceous aerosol in Polar areas: First results and improvements of the sampling strategies. Atmosphere, 12(320), 1-18. doi:10.3390/atmos12030320.
8. Amore et al. (2021). Source apportionment of sulphate in the High Arctic by a 10 yr-long record from Gruvebadet Observatory (Ny-Ålesund, Svalbard Islands). Atmospheric Environment, 270, 118890. doi:10.1016/j.atmosenv.2021.118890.
9. Costabile et al. (2022). On the Redox-Activity and Health-Effects of Atmospheric Primary and Secondary Aerosol: Phenomenology. Atmosphere, 13, 704. doi:10.3390/atmos13050704.
10. Giardi et al. (2022). PM10 variation, composition, and source analysis in Tuscany (Italy) following the COVID-19 lockdown restrictions. Atmospheric Chemistry and Physics, 22, 9987–10005. doi:10.5194/acp-22-9987-2022.