

# CURRICULUM VITAE

## PAOLA FERMO

**Place and date of birth:** Milan, 12-22-1969  
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- **Academic qualifications**

1993	Degree in Chemistry, University of Milan (110/110)
1997	PhD in Chemistry, University of Milan
1997– 1999	Technical collaborator in the Department of Inorganic, Metallorganic and Analytical Chemistry, University of Milan
1999 - 2014	Researcher in Analytical Chemistry, Department of Inorganic, Metallorganic and Analytical Chemistry, University of Milan
2015	Associate Professor of Analytical Chemistry, Department of Chemistry, University of Milan

- **Principal fields of research**

**environmental chemistry:**

- 1) characterization of aerosol particulate matter carried out by different analytical techniques with particular attention to the quantification and speciation of the carbonaceous fraction; analysis of specific markers for the identification of aerosol PM sources (levoglucosan, PAH, alkanes, hopanes, etc.); indoor particulate matter and source apportionment;
- 2) chemical characterization of potential biomarker (such as honey or plant leaves) of environmental pollution.

**analytical chemistry applied to cultural heritage:**

- 1) provenance study of archaeological ceramics, technological and compositional study of Italian Renaissance majolicas, characterization of Roman wall paintings;
- 2) study of new coatings based on nano-materials for the protection of materials of artistic-historical-interest (marbles, mortars).

Member of SCI (Italian Chemical Society), IAS (Italian Aerosol Society), AIAR (Italian Association of Archaeometry).

- **Publications**

88 scientific publications on peer reviewed international journals in the field of environmental and analytical chemistry as well as applied physic and archaeometry; 20 conference proceeding; 12 book chapters; about 200 communications in national and international congresses; invited speakers in international congresses.

h index (Scopus) =19

Citations= about 1100

Reviewer of numerous international journals; member of the Editorial Board of international journals (Mediterranean Journal of Chemistry, Annals of Chromatography and Separation Techniques, Journal of Analytical and Bioanalytical Techniques, American Journal of Analytical Chemistry).

- **Teaching activity**

Adjoint Professor of Analytical Chemistry and Environmental Chemistry from 2001 to 2013  
From 2015 Associate Professor of Analytical Chemistry.  
Member of doctoral committee; thesis supervisor of students ; supervisor of PhD students

- **Major funded national and international research projects**

FIRB2003: Archaeology, Archaeometry and archeoinformatica for knowledge, conservation and enhancement of ancient Mediterranean landscape (principal investigator of the scientific unit)

Parfil 2004-2007 (Particolato Fine in Lombardia, Fine Particulate Matter in the Lombardy Region)  
Funded by Lombardy Region

Research project (funded by Fondazione CARIPOLO), "Il cortile del Richini (Università degli Studi di Milano, Via Festa del Perdono)", 1 January 2010 - 30 June 2011 (principal investigator of the scientific unit)

Tender 17/07 - EUROPEAN COMMISSION

Public contract: "Carbon Speciation and Levoglucosan Analysis of Particulate matter from Lombardy Region" - JRC JOINT RESEARCH CENTRE, ISPRA, Institute for Environment and Sustainability Management Support; 2007-2009

Research project (funded by Fondazione CARIPOLO), Title: "TOxicity of BIomass COmbustion generated by Ultrafine Particles (TOBICUP)", June 2014 - June 2016; principal investigator of the scientific unit.

### **Recent Publications**

Ielpo, P., Fermo, P., Comite, V., Mastroianni, D., Viviano, G., Salerno, F., Tartari, G.  
Chemical characterization of biomass fuel particulate deposits and ashes in households of Mt. Everest region (NEPAL)  
(2016) Science of the Total Environment, 573, pp. 751-759.

Benetello, F., Squizzato, S., Hofer, A., Masiol, M., Khan, M.B., Piazzalunga, A., Fermo, P., Formenton, G.M., Rampazzo, G., Pavoni, B.  
Estimation of local and external contributions of biomass burning to PM<sub>2.5</sub> in an industrial zone included in a large urban settlement  
(2016) Environmental Science and Pollution Research, pp. 1-16. Article in Press.  
DOI: 10.1007/s11356-016-7987-0

Fermo, P., Andreoli, M., Bonizzoni, L., Fantauzzi, M., Giubertoni, G., Ludwig, N., Rossi, A.  
Characterisation of Roman and Byzantine glasses from the surroundings of Thugga (Tunisia): Raw materials and colours  
(2016) Microchemical Journal, 129, pp. 5-15.

Cattaneo, A., Fermo, P., Urso, P., Perrone, M.G., Piazzalunga, A., Tarlassi, J., Carrer, P., Cavallo, D.M.  
Particulate-bound polycyclic aromatic hydrocarbon sources and determinants in residential homes  
(2016) Environmental Pollution, 218, pp. 16-25.

Fasani, D., Fermo, P., Barroso, P.J., Martín, J., Santos, J.L., Aparicio, I., Alonso, E.  
Analytical Method for Biomonitoring of PAH Using Leaves of Bitter Orange Trees (*Citrus aurantium*): a Case Study in South Spain  
(2016) *Water, Air, and Soil Pollution*, 227 (10), art. no. 360, .

Pino, F., Fermo, P., la Russa, M., Ruffolo, S., Comite, V., Baghdachi, J., Pecchioni, E., Fratini, F., Cappelletti, G.  
Advanced mortar coatings for cultural heritage protection. Durability towards prolonged UV and outdoor exposure  
(2016) *Environmental Science and Pollution Research*, pp. 1-10. Article in Press.

Amadori, M.L., Del Vais, C., Fermo, P., Pallante, P.  
Archaeometric researches on the provenance of Mediterranean Archaic Phoenician and Punic pottery  
(2016) *Environmental Science and Pollution Research*  
DOI: 10.1007/s11356-016-7065-7

Bozzetti, C., Daellenbach, K.R., Hueglin, C., Fermo, P., Sciare, J., Kasper-Giebl, A., Mazar, Y., Abbaszade, G., El Kazzi, M., Gonzalez, R., Shuster-Meiseles, T., Flasch, M., Wolf, R., Křepelová, A., Canonaco, F., Schnelle-Kreis, J., Slowik, J.G., Zimmermann, R., Rudich, Y., Baltensperger, U., El Haddad, I., Prévôt, A.S.H.  
Size-Resolved Identification, Characterization, and Quantification of Primary Biological Organic Aerosol at a European Rural Site  
(2016) *Environmental Science and Technology*, 50 (7), pp. 3425-3434. Cited 2 times.

Daellenbach, K.R., Bozzetti, C., Křepelová, A., Canonaco, F., Wolf, R., Zotter, P., Fermo, P., Crippa, M., Slowik, J.G., Sosedova, Y., Zhang, Y., Huang, R.-J., Poulain, L., Szidat, S., Baltensperger, U., El Haddad, I., Prévôt, A.S.H.  
Characterization and source apportionment of organic aerosol using offline aerosol mass spectrometry  
(2016) *Atmospheric Measurement Techniques*, 9 (1), pp. 23-39. Cited 2 times.

Bove, M.C., Brotto, P., Calzolari, G., Cassola, F., Cavalli, F., Fermo, P., Hjorth, J., Massabò, D., Nava, S., Piazzalunga, A., Schembari, C., Prati, P.  
PM10 source apportionment applying PMF and chemical tracer analysis to ship-borne measurements in the Western Mediterranean  
(2016) *Atmospheric Environment*, 125, pp. 140-151. Cited 3 times.

C. Guglieri Rodriguez, P. Fermo, L. Olivi, G. Padelett (2015). A comparative study of Hispano-Moorish and Italian Renaissance lustred majolicas by using X-ray absorption spectroscopy. *JOURNAL OF ANALYTICAL ATOMIC SPECTROMETRY*, vol. 30, p. 738-744, ISSN: 0267-9477, doi: 10.1039/c4ja00382a

P. Panteliadis, T. Hafkenscheid, B. Cary, E. Diapouli, A. Fischer, O. Favez, P. Quincey, M. Viana, R. Hitzengerger, R. Vecchi, D. Saraga, J. Sciare, J.L. Jaffrezo, A. John, J. Schwarz, M. Giannoni, J. Novak, A. Karanasiou, P. Fermo, W. Maenhaut (2015). ECOC comparison exercise with identical thermal protocols after temperature offset correction : instrument diagnostics by in-depth evaluation of operational parameters. *ATMOSPHERIC MEASUREMENT TECHNIQUES*, vol. 8, p. 779-792, ISSN: 1867-1381, doi: 10.5194/amt-8-779-2015

P. Fermo, R. Gonzalez Turrion, M. Rosa, A. Omegna (2014). A new approach to assess the chemical composition of powder deposits damaging the stone surfaces of historical monuments. ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH INTERNATIONAL, ISSN: 0944-1344, doi: 10.1007/s11356-014-3855-y

P. Zotter, V. G. Ciobanu, Y. L. Zhang, I. El-Haddad, M. Macchia, K. R. Daellenbach, G. A. Salazar, R. J. Huang, L. Wacker, C. Hueglin, A. Piazzalunga, P. Fermo, M. Schwikowski, U. Baltensperger S. Szidat, A. S. H. Prévôt (2014). Radiocarbon analysis of elemental and organic carbon in Switzerland during winter-smog episodes from 2008 to 2012. Part 1. : source apportionment and spatial variability. ATMOSPHERIC CHEMISTRY AND PHYSICS, vol. 14, p. 13551-13570, ISSN: 1680-7316, doi: 10.5194/acp-14-13551-201

G. Cappelletti, P. Fermo, M. Camilioni (2014). Smart hybrid coatings for natural stones conservation. PROGRESS IN ORGANIC COATINGS, ISSN: 0300-9440, doi: 10.1016/j.porgcoat.2014.05.029