



Irini Tsiodra, Ph.D

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Date of birth: 20/07/1993 **Nationality:** Greek

WORK EXPERIENCE

[01/09/2023 – Current]

Research fellow

Institute for Environmental Research & Sustainable Development - National Observatory of Athens

City: Athens

Country: Greece

Research assistant in the research project «REGENERATE (REactive oxyGEN Species in aerosols: assEssing the health effect of paRticulAte matter)» - Hellenic Foundation for Research and Innovation (H.F.R.I.)

[01/07/2017 – 31/07/2023]

Affiliate member

Institute of Chemical Engineering Sciences (ICE-HT) Foundation of Research and Technology-Hellas

City: Patras

Country: Greece

Name of unit or department: Center of Studies on Air quality and Climate Change (C-STACC)

Research assistant in the research project "Pyrogenic Transformations Affecting Climate and Health (PyroTRACH)", which is implemented under the H2020-EU.1.1. - EXCELLENT SCIENCE - European Research Council (ERC). The main objective of PyroTRACH is to quantify the evolution of biomass burning emissions in the atmosphere together with their impacts on human health and climate.

- Analysis of biomass burning tracers in aerosols in Eastern Mediterranean region
- Calculation of the carcinogenic potency of Polycyclic Aromatic Hydrocarbons (PAHs) in aerosols

<https://cordis.europa.eu/project/id/726165>

<http://cstacc.iceht.forth.gr/>

EDUCATION AND TRAINING

[01/07/2017 – 16/06/2023]

PhD Candidate

University of Crete - Chemistry Department

City: Heraklion

Country: Greece

Thesis: Biomass burning tracers in the atmosphere

Environmental Analytical Chemistry of Toxic Organic Compounds (PAHs) in aerosols and Application of Mass Spectrometry

Supervisors: Prof. Nikolaos Mihalopoulos - Prof. Athanasios Nenes

[01/09/2015 – 12/05/2017]

M.Sc Student - Science and environmental engineering

University of Crete - Chemistry Department

City: Heraklion

Country: Greece

Master thesis: Real time measurements of water soluble phosphoric ions in PM2.5 aerosols at the Eastern Medeterranean.

Supervisor: Professor Nikolaos Mihalopoulos

[01/10/2014 – 01/07/2015]

Diploma thesis

Environmental and Chemical Processes Laboratory (ECPL), University of Crete - Chemistry Department

City: Heraklion

Country: Greece

Diploma thesis : Gas/ Particle distribution of aerosols at Eastern Mediterranean atmosphere.

Supervisor: Prof. Nikolaos Mihalopoulos

[01/09/2011 – 01/07/2015]

Undergraduate student

University of Crete - Chemistry Department

City: Heraklion

Country: Greece

[01/07/2014 – 30/09/2014]

Internship

General Chemical State Laboratory of Greece

City: Volos

Country: Greece

[18/05/2017 – 24/05/2017]

Summer school attendance

Hellenic Association for Aerosol Research (HAAR) <http://hellenic-aerosol.org/post.php?howMany=5&id=p11&l=en>

Address: Navarino Environmental Observatory, Messinia, Greece

Theory and practice of aerosol chemistry and engineering for climate, air quality, emissions and health effects. Training on state-of-the-art instruments for determining the key properties of atmospheric aerosols, the tools for analyzing and interpreting the data, and the knowledge for putting those in the context of climate change.

LANGUAGE SKILLS

Mother tongue(s): Greek

Other language(s):

English

LISTENING C2 READING C2 WRITING C1

SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

PUBLICATIONS

[2021]

[Annual exposure to polycyclic aromatic hydrocarbons in urban environments linked to wintertime wood-burning episodes](#)

Irini Tsiodra, Georgios Grivas, Kalliopi Tavernaraki, Aikaterini Bougiatioti, Maria Apostolaki, Despina Paraskevopoulou, Alexandra Gogou, Constantine Parinos, Konstantina Oikonomou, Maria Tsagkaraki, Pavlos Zampas, Athanasios Nenes, and Nikolaos Mihalopoulos

[2021]

[Water soluble reactive phosphate \(SRP\) in atmospheric particles over East Mediterranean: The importance of dust and biomass burning events](#)

K. Violaki, **I. Tsiodra**, A. Nenes, M. Tsagkaraki, G. Kouvarakis, P. Zampas, K. Florou, C. Panagiotopoulos, E. Ingall, R. Weber, and N. Mihalopoulos, *Water Soluble Reactive Phosphate (SRP) in Atmospheric Particles over East Mediterranean: The Importance of Dust and Biomass Burning Events*, *Sci. Total Environ.* **830**, 154263 (2022).

[2020]

[Physicochemical Characterization of Personal Exposures to Smoke Aerosol and PAHs of Wildland \(...\)](#)

Nelson, J., Chalbot, M.G., **Tsiodra, I.**, Mihalopoulos, N., and Kavouras, I. .Physicochemical Characterization of Personal Exposures to Smoke Aerosol and PAHs of Wildland Firefighters in Prescribed Fires. *Expo Health* (2020). <https://doi.org/10.1007/s12403-020-00366-5>

[2019]

[Atmospheric Evolution of Molecular Weight Separated Brown Carbon from Biomass Burning](#)

Wong, J.P.S., Tsagaraki, M., **Tsiodra, I.**, Mihalopoulos, N., Violaki, K., Kanakidou, M., Sciare, J., Nenes, A., and Weber, R.J. (2019) Atmospheric Evolution of Molecular Weight Separated Brown Carbon from Biomass Burning, *Atmos. Chem. Phys.*, **19**, 7319–7334

[2019]

[Effects of Atmospheric Processing on the Oxidative Potential of Biomass Burning Organic Aerosols](#)

Wong, J.P.S., Tsagaraki, M., **Tsiodra, I.**, Mihalopoulos, N., Violaki, K., Kanakidou, M., Sciare, J., Nenes, A., and Weber, R.J. (2019) Effects of Atmospheric Processing on the Oxidative Potential of Biomass Burning Organic Aerosols, *Env.Sci.Tech.*,

[53 \(12\), 6747-6756, doi:10.1021/acs.est.9b01034](#)

BOOK CHAPTER

Atmospheric Chemistry in the Mediterranean Region Volume 1 - Background Information and Pollutant Distribution

Atmospheric Chemistry in the Mediterranean Region-Part IV Inorganic Aerosol Precursors in the Mediterranean Atmosphere

Eleni Liakakou, Nikolaos Mihalopoulos, Christina Theodosi, **Eirini Tsiodra**, Dimitris G. Kaskaoutis, Maria-Elissavet Koukouli et al.

Pages 471-503

- DOI:<https://doi.org/10.1007/978-3-031-12741-0>
- eBook ISBN 978-3-031-12741-0 Published: 22 July 2023

CONFERENCES AND SEMINARS

[03/09/2023 – 08/09/2023] **European Aerosol Conference (EAC2023)** Malaga, Spain

I.Tsiodra, G. Grivas, A. Bougiatioti, C. Parinos, D. Paraskevopoulou, K.Tavernaraki 1, M.Tsagkaraki, K.Papoutsidaki, K.Oikononou, A. Nenes and N. Mihalopoulos, Exposure to Polycyclic and Oxygenated Polycyclic Aromatic Hydrocarbons (PAHs and OPAHs) in a European urban center with an emphasis on the biomass burning impact on air quality

Link: <https://www.dfmf.uned.es/EAC2023/>

[04/09/2022 – 09/09/2022] **11th International Aerosol Conference (IAC 2022)** Athens, Greece

I.Tsiodra, G. Grivas, A. Bougiatioti, C. Parinos, D. Paraskevopoulou, A. Nenes and N. Mihalopoulos, Yearlong measurements of aerosol oxygenated Polycyclic Aromatic Hydrocarbons (OPAHs) in Athens, Greece, 11th International Aerosol Conference (IAC 2022), September 4th-9th, 2022, Athens Greece

Link: <https://iac2022.gr/>

[04/09/2022 – 09/09/2022] **11th International Aerosol Conference (IAC 2022)** Athens, Greece

K. Tavernaraki, **I. Tsiodra**, K. Papoutsidaki, G. Grivas, E. Liakakou, G. Kouvarakis, M. Tsagaraki, F. Kozonaki, P. Zampas, I. Stavroulas, E. Gerasopoulos and N. Mihalopoulos, Levels and sources of particulate Polycyclic Aromatic Hydrocarbons (PAHs) at the Port of Piraeus 11th International Aerosol Conference (IAC 2022), September 4th-9th, 2022, Athens Greece

[30/08/2021 – 03/09/2021] **European Aerosol Conference 2021 (EAC 2021)** online

I.Tsiodra, A. Bougiatioti, G. Grivas, C. Parinos, D. Paraskevopoulou, A. Nenes, and N. Mihalopoulos, Polycyclic Aromatic Quinones (PAQs) in Athens aerosols, European Aerosol Conference 2021 (EAC 2021), Online, 30 August - 3 September 2021

Link: <https://eac2021.co.uk/>

[19/04/2021 – 30/04/2021] **European Geosciences Union General Assembly 2021 (EGU 2021)** online

I.Tsiodra, K.Tavernaraki, A.Bougiatioti, G.Grivas, M.Apostolaki, D.Paraskevopoulou, A. Gogou, C. Parinos, M. Tsagkaraki, P. Zampas, A.Nenes and N. Mihalopoulos: Year-long variability of polycyclic aromatic hydrocarbons (PAHs) and their contribution on winter intense pollution events in the urban environment of Athens, Greece, EGU General Assembly 2021, Online, 19-30 April 2021

[26/09/2021 – 29/09/2021]

15th International Conference on Meteorology, Climatology and Atmospheric Physics 2021 (COMECAP 2021)

Ioannina Greece

K. Tavernaraki, **I. Tsiodra**, K. Papoutsidaki, M. Tsagaraki, P. Zampas, G. Kouvarakis, G. Grivas, E. Liakakou, I. Stavroulas, E. Gerasopoulos, N. Mihalopoulos: Levels and sources of Polycyclic aromatic hydrocarbons at Piraeus port, COMECAP 2021, 26-29 September 2021, Ioannina Greece

Link: www.comecap2021.gr

[26/09/2021 – 29/09/2021]

15th International Conference on Meteorology, Climatology and Atmospheric Physics 2021 (COMECAP 2021)

Ioannina Greece

Neroladaki A., Stavroulas I., **Tsiodra I.**, Kalivitis N., Myriokefalitakis S. Bougiatioti A., Mihalopoulos N., Nenes A. and Kanakidou M.: Variation of CCN and potential CDNC in the eastern Mediterranean, 15th International Conference on Meteorology, Climatology and Atmospheric Physics 2021 (COMECAP 2021) September 2021, Ioannina Greece

Link: www.comecap2021.gr

[31/08/2020 – 04/09/2020] **European Aerosol Conference (EAC 2020)** online

Tsiotra I., Tavernaraki K., Bougiatioti, A., Paraskevopoulou D. Mihalopoulos N. & Nenes A. The effect of polycyclic aromatic hydrocarbons (PAHs) and their oxidation derivatives in the Greek urban environment, European Aerosol Conference (EAC 2020), online August 31-September 4, 2020 (Poster Presentation)

Link: eac2020.de

[04/05/2020 – 08/05/2020] **European Geosciences Union General Assembly 2020 (EGU 2020)** online

Neroladaki, A. M., Stavroulas, I., **Tsiotra, I.**, Myriokefalitakis, S., Nenes, A., Mihalopoulos, N., and Kanakidou, M.: Seasonal variability of submicron aerosol acidity at a coastal site in the Eastern Mediterranean, EGU General Assembly 2020, Online, 4–8 May 2020, EGU2020-9562, <https://doi.org/10.5194/egusphere-egu2020-9562>, 2020 (Poster Presentation)

[07/04/2019 – 12/04/2019] **European Geosciences Union General Assembly 2019 (EGU 2019)** Vienna, Austria

J. P.S. Wong, M. Tsagkaraki, **I.Tsiotra**, N. Mihalopoulos, K.Violaki, M.Kanakidou, J.Sciare, A.Nenes and R.Weber: Effects of Atmospheric Aging on Light Absorptivity and Oxidative Potential of Biomass Burning Organic Aerosols, EGU General Assembly 2019, 7-12 April 2019, Vienna, Austria (Poster Presentation)

[02/09/2018 – 07/09/2018] **20th International Aerosol Conference** Saint Louis, Missouri, USA

D. Paraskevopoulou, **I. Tsiotra**, A. Bougiatioti, M. Tsagkaraki, R. Weber, A. Nenes, N. Mihalopoulos, "ROS-generating capacity of particulate matter over two cities in Eastern Mediterranean", 20th International Aerosol Conference, 2 – 7 September 2018, Saint Louis, Missouri, USA (Poster Presentation)

[08/04/2018 – 13/04/2018] **European Geosciences Union General Assembly 2018 (EGU 2018)** Vienna, Austria

Tsiotra I., M. Tsagkaraki, P. Zarmpas, K. Violaki, R. Weber, A. Nenes and N. Mihalopoulos, "The atmospheric delivery and controls of soluble P in the E. Mediterranean", European Geosciences Union General Assembly 2018 (EGU 2018), Vienna, Austria, 8- 13 April 2018. (Oral Presentation)

[17/09/2017 – 21/09/2021]

10th International Conference on Instrumental Methods of Analysis - IMA 2017

Heraklion, Greece

Eirini Tsiotra, Maria Tsagkaraki, Pavlos Zarmpas, Kalliopi Violaki, Rodney Weber, Athanasios Nenes and Nikolaos Mihalopoulos: REAL TIME MEASUREMENTS OF WATER SOLUBLE PHOSPHATE IONS IN PM 2.5 AEROSOLS AT THE EASTERN MEDITERRANEAN, 10th International Conference on Instrumental Methods of Analysis - IMA 2017, 17-21 September 2017, Heraklion, Greece (poster presentation)

HONOURS AND AWARDS

[2021] **Scholarship Awarding institution:** Independent Power Transmission Operator S.A. (IPTO)

[11/2022] **Dr. Maria Hatzimarinaki award Awarding institution:** Department of Chemistry, University of Crete
Dr.Hatzimarinaki award

Scholarship

European Research Council Consolidator grant scholarship (PyroTRACH) grant (726165) H2020-EU.1.1. – Excellent Science 2018-2023

EXPERIENCE

[01/11/2017 – 31/07/2023] **Participation in research projects**

1/11/20217-31/7/2023: participant at European Research Council (ERC), CoG-2016 project 726165, Pyrogenic Transformations affecting Climate and Health (PyroTRACH)

1/9/2023-ongoing: participant at REGENERATE (REactive oxyGEN Species in aerosols: assEssing the health effect of paRticulate matter)

Experience

- Gas chromatography-mass spectrometry (GC-MS)
- Environmental organic chemistry
- Data processing
- HPLC
- Ion Chromatography
- UV-Vis
- Aethalometer
- Atmospheric offline & online sampling

[Current] **Reviewer**

Reviewer at international scientific journals:

- Atmospheric Environment
- Aerosol and Air Quality Research

SOCIAL AND POLITICAL ACTIVITIES

[01/09/2012 – 01/10/2021]

Volunteer-General Secretary of Pancretan Assosiation of Blood and Organ Donors "Hematocrete"

Heraklion Crete

<https://www.aimatocritis.gr/>

Volunteer on blood donation services