



Erica Gagliano

Researcher in Environmental and Sanitary Engineering

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EDUCATION AND TRAINING

2021

Ph.D. in “Evaluation and mitigation of urban and land risks”

Thesis title: *“Microwave regeneration of activated carbon saturated with contaminants of emerging concern (CEC)”*

University of Catania (Italy)

2017

Master’s Degree in “Environmental Engineering”

Thesis title: *“Treatment of landfill leachate: Lab and pilot-scale tests”*

University of Catania (Italy)

2014

Bachelor's degree (three-year degree) in “Civil and Environmental Engineering”

Thesis title: *“Sedimentation and Flotation: Theoretical Aspects and Application in Water Treatment”*

University of Catania (Italy)

PROFESSIONAL HISTORY

2022-Present

Fixed-Term Assistant Professor

Research field: Circular Economy, Sustainability, Life Cycle Assessment (LCA) methodology, Social Life Cycle Assessment, biowaste valorization, climate change mitigation and adaptation, biodiversity restoration and valorization.

University of Genoa (Italy)

2021

Post-Doc Fellow

Research field: Water-Energy-Food Nexus (WEF), sustainable management and treatment of water/wastewater, Contaminants of Emerging concern (CEC), Per- and polyfluoroalkyl substances (PFAS).

University of Catania (Italy)

EXPERIENCE

SCIENTIFIC PARTICIPATION IN RESEARCH PROJECTS ACCEPTED FOR FUNDING ON THE BASIS OF COMPETITIVE CALLS INVOLVING PEER REVIEW

2020-2024 Member of the research team

Project: "Microwave regeneration of PFAS-exhausted granular activated carbons"

The Water Research Foundation

RESEARCH PERIOD AT FOREIGN UNIVERSITIES AND RESEARCH INSTITUTES

2020 Visiting Ph.D. student (6 months)

Lab-scale experimental activities on the adsorption process for removing per- and Polyfluoroalkyl Substances (PFAS) and the regeneration of PFAS-saturated granular activated carbon (GAC)

Clemson University (South Carolina, U.S.A.)

EDITORSHIP OR PARTICIPATION IN EDITORIAL BOARDS OF JOURNALS, PUBLISHING SERIES, ENCYCLOPAEDIAS AND TREATISES

2024-Present Editorial Board Member of "Journal of Environmental Management"

2024 Guest Editor of Special Issue "The Latest Advances and Challenges in Removing PFAS from Water", Water (MDPI)

2022-Present Review Editor of "Frontiers in Sustainability"

PRIZES AND ACCOLADES FOR SCIENTIFIC ACTIVITY, INCLUDING MEMBERSHIP OF ACADEMIES

2022-present Award "Highly Cited Paper"

The paper entitled "Removal of poly- and perfluoroalkyl substances (PFAS) from water by adsorption: Role of PFAS chain length, effect of organic matter and challenges in adsorbent regeneration" (Gagliano et al., 2020, DOI: 10.1016/j.watres.2019.115381) published on "Water Research" received enough citations to place it in the top 1% of the academic field of Environment/Ecology based on a highly cited threshold for the field and publication year
Source Web of Science

2022 Certificate of Excellence in Review

Award in recognition of an exceptional contribution to ensure the high quality of the journal, determined by the number of peer review reports performed during the award year
Journal of Environmental Management (Elsevier)

2022 Best Platform Presentation

Prediction of emerging contaminants removal during multiple pilot scale advanced oxidation processes with an artificial neural network model based on fluorescence measurements

12th IWA Micropol & Ecohazard Conference – Micropol 2022, Spain

2021 Certificate of Excellence in Review

Award in recognition of an exceptional contribution to ensure the high quality of the journal, determined by the number of peer review reports performed during the award year
Journal of Environmental Management (Elsevier)

OTHER EXPERIENCES

2020-present Peer Reviewer for Journals and Conference Proceedings

Journal of Environmental Management (Elsevier), Chemosphere (Elsevier), Water and Environment Journal (Winley), Chemical Engineering Journal (Elsevier), Heliyon Environment (Cell Press Journal), Data in Brief (Elsevier), Environmental Science: Water Research & Technology (Royal Society of Chemistry), Separation and Purification Technology (Elsevier), Nature Water (Springer Nature), Journal of Chemical Engineering (Elsevier).

2018-present Supervisor/co-supervisor of Master's and Ph.D.'s theses

RESEARCH INTERESTS

- Advancing circular economy models to enhance resource efficiency and minimize waste streams.
- Developing integrated sustainability assessment frameworks combining environmental, social, and economic indicators.
- Applying Life Cycle Assessment (LCA) and Social Life Cycle Assessment (S-LCA) methodologies to evaluate technologies, products, and systems.
- Innovating pathways for biowaste valorization into high-value products, energy, and bio-based materials.
- Designing strategies for climate change mitigation and adaptation in urban, industrial, and agricultural systems.
- Exploring biodiversity restoration and valorization as key components of sustainable land-use planning.
- Investigating the Water-Energy-Food (WEF) Nexus for integrated management of natural resources.
- Developing sustainable management and advanced treatment technologies for water and wastewater.
- Investigating the occurrence, fate, and mitigation of Contaminants of Emerging Concern (CECs) in aquatic environments.
- Addressing the environmental risks of Per- and polyfluoroalkyl substances (PFAS) through removal and remediation strategies.
- Advancing microwave-assisted regeneration methods for adsorbents, catalysts, and filtration materials.