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DESCRIPTION

Environmental Pollution is an international journal that seeks to publish papers that report results from original, novel research that addresses significant environmental pollution issues and problems and contribute new knowledge to science.

The editors welcome high quality papers where the pollutants are clearly defined and measured and can be directly related to biological, ecological, and human health effects. This includes air, water, and soil pollution and climate change. New techniques for the study and measurement of pollutants and their effects are also encouraged as well as papers on new types of environmental challenges such as pollution/antibiotic resistances of organisms. Emerging pollutions are of eminent interest, such as microplastics, electronic wastes, light or noise pollution as long as they can clearly be related to the biological effects mentioned above. Papers must be process-orientated and/or hypotheses-based to be considered for population. Papers based on field studies are given priority for publication over micro/meso cosmos studies.

Papers, such as meta analyses, that report findings from re-examination and interpretation of existing data are welcome. Modeling papers are welcome only to a certain extent, i.e., they must be related to a specific pollution issue or process that is potentially of ecological and/or human health implications. Critical review papers and commentaries are also of high interest as are letters to the editor.

The editors do not wish to publish papers that describe results from routine surveys and monitoring programs that are primarily of local or regional interest. Descriptions of well-known pollutants, such as legacy pollutants, in yet another location are not of interest. Papers about sewage, waste and wastewater treatment and management as well as standard techniques in agronomy, remediation, biomonitoring, bioremediation and phytoremediation are not acceptable. However, papers on innovative techniques to combat regional or global problems are welcome; however, technical studies must show their field applicability.

Furthermore, the editors discourage submission of papers which describe analytical methods, laboratory experiments, food science studies, screening of new plant/animal/microorganism species for effect assessments and testing known pollution and chemicals in another setting. Eutrophication studies and secondary pollution by eutrophication are not covered by *Environmental Pollution*. In the same line, papers on ocean enrichment by CO₂ will not be accepted.

The abstract (up to 300 words), highlights and conclusions of papers in this journal must contain clear and concise statements. A graphical abstract is mandatory. A cover letter must be accompanied

with each submission, containing clear and concise statements as to why the study was done and how readers will benefit from the results.

Articles submitted for publication in *Environmental Pollution* should establish connections among research findings with implications for environmental quality, ecological health, and/or human health. The cover letter must explicitly express how the submission fits the Aims and Scope of Environmental Pollution. Failure to include the paragraph will result in returning the paper to the author.

The editors welcome the following contributions:

- *Full research papers*: Results from completed investigations reporting original and previously unpublished work.
- *Short communications*: A brief communication of urgent matter or the reporting of preliminary findings to be given expedited publication.
- *Review papers*: In-depth critical reviews of special subjects. Authors planning reviews should contact one of the editors prior to submission.
- *Commentaries*: Opinions and concerns about current scientific issues, invited or unsolicited
- *Letters to the Editor*: Short focused letters to raise issues or concerns about papers published in the journal and solicit a reply from the authors of those papers
- *Special Issues*. Special Issues will be published on emerging thematic issues and innovative conferences. An Editor or Associate Editor should be contacted early in the conference planning process to get approval and for guidelines on special issues of the journal. Furthermore, the Editors or Associate Editors will invite leading experts as Guest Editors for Special Issues.

Editors-in-Chief: D.O. Carpenter & Eddy Y. Zeng

AUDIENCE

Pollution research workers including chemists, toxicologists, environmentalists, conservationists, botanists, marine scientists, ecologists, biologists.

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EDITORIAL BOARD

Co-Editors-in-Chief:

David Carpenter, University at Albany, SUNY, Rensselaer, New York, USA

Human health; Environmental exposures; Persistent organics; Chronic disease; Cancer; Diabetes

Eddy Zeng, Jinan University, Guangzhou, China

Persistent organic pollutants; Bioaccumulation; Human exposure; Health risk assessment; Inter-compartmental diffusion flux; Passive sampling; Wet and dry deposition

Associate Editors:

Da Chen, Jinan University, Gangzhou, China

Environmental chemistry; Analytical chemistry; Ecotoxicology; Persistent organic pollutants; Flame retardants; Pesticides; Mass spectrometry; Gas/liquid chromatography.

Wen Chen, Sun Yat-Sen University, Guangzhou, China

Environmental Toxicology; Chemical Carcinogenesis; Epigenetic Regulation; Biomarkers

Payam Dadvand, Instituto de Salud Global Barcelona (ISGlobal), Barcelona, Spain

Epidemiological studies on the health effects of environmental factors.

Maria Cristina Fossi, Università di Siena, Siena, Italy

Marine Pollution; Persistent Organic Contaminants; Aquatic Toxicology; Microplastic; Plastic, Marine Litter; Ecotoxicological biomarkers; Marine Mammals; Large marine vertebrates; Endocrine disruptors.

Kimberly Hageman, University of Otago, Dunedin, New Zealand

Persistent organic pollutants; Pesticides; Long-range atmospheric transport; Chemical fate; Partition coefficients.

Sarah Harmon, University of South Carolina Aiken, Aiken, South Carolina, USA

Aquatic toxicology; Water pollution; Heavy metals toxicity; Fecal coliform pollution; Mercury toxicity.

Klaus Kümmerer, Leuphana Universität Lüneburg, Lüneburg, Germany

Sustainable Chemistry; Green Chemistry; Green and Sustainable Pharmacy; Resources; Benign by Design; Environmental Chemistry; Time and sustainability

Bernd Nowack, Swiss Federal Laboratories for Materials Science and Technology, St. Gallen, Switzerland

Nanomaterials: Fate, Effects, Analysis and risks; Chelating agents; Metal speciation in water and soils; Pollutants in soils; Metal in soils; Bioavailability of pollutants; Environmental risk assessment.

Yong Sik Ok, Korea University, Seoul, The Republic of Korea

Soil pollution; Soil remediation; Heavy metals in the environment; Waste management; Bioavailability of Emerging Contaminants; Bioenergy and value-added products; Biochar and soil organic matter; Phytoremediation.

Jörg Rinklebe, University of Wuppertal, Wuppertal, Germany

Soils, sediments, waters, plants, and their pollutions (in particular trace elements and nutrients) and linked biogeochemical issues with a special focus in redox chemistry; Remediation of soils and soil microbiology.

Wen-Xiong Wang, Hong Kong University of Science and Technology, Kowloon, Hong Kong

Metal Pollution, Metal Ecotoxicology, Metal Biogeochemistry, Metal Bioavailability, Metal bioaccumulation, Metal toxicity, Environmental processes of metals, Biomonitoring, Biomarkers, Bioassays.

Charles Wong, University of Winnipeg, Winnipeg, Manitoba, Canada

Environmental organic chemistry, persistent organic chemicals, pharmaceuticals and personal care products, metabolites and transformation products, environmental/analytical chemistry, passive samplers, wastewater, ecotoxicology, bioaccumulation and food web interactions.

Baoshan Xing, University of Massachusetts, Amherst, Massachusetts, USA

Engineered Nanoparticles; Organic Contaminants; Biochar; Soil Organic Matter; Sorption Of Organic Chemicals.

Editorial Board:

Dula Amarasinghwardena, Hampshire College, Amherst, Massachusetts, USA

Metal Pollution, environmental trace metal determination (ICP-MS, LA-ICP-MS), metal chemical speciation, toxic metals in soils, tissue level, elemental bioimaging, nanoparticles in environment, environmental remediation-metals, humic substances in the environment.

Allen Barker, University of Massachusetts, Amherst, Massachusetts, USA

Nigel Bell, Imperial College London, Kensington, London, UK

Effects of air pollution on managed and natural ecosystems; radioecology; waste management.

Thomas Borch, Colorado State University, Fort Collins, Colorado, USA

Hydraulic fracturing, emerging contaminants, uranium mining, and carbon sequestration.

Birgit Braune, Environment and Climate Change Canada, Ottawa, Ontario, Canada

Arctic, marine ecosystems, birds, metals, organo-compounds, biomonitoring, biological effects.

Juergen Burkhardt, University of Bonn, Germany

Andrzej Bytnerowicz, U.S. Department of Agriculture (USDA), Forest Service, Riverside, California, USA

Air pollution, monitoring, ozone, atmospheric deposition of nitrogen and sulfur, critical loads, impacts of wildland fires on air quality, evaluation of forest health, interactive effects of air pollution and climate change on terrestrial ecosystem, ambient air quality standards, passive samplers.

Art Chappelka, Auburn University, Auburn, Alabama, USA

Air pollution and global climate effects to terrestrial ecosystems; Native plant community responses (shifts in diversity) to air pollutants and global climate change; Plant-stress-air pollution/global climate change interactions; Urban ecology and ecosystem services

Alessandra De Marco, ENEA Centro Ricerche Casaccia, S. Maria di Galeria, Rome, Italy

Impacts of air pollution on vegetation, with particular interest on ozone and nitrogen deposition; climate change and air pollution interactions and their synergistic impacts on ecosystems; integrated assessment modelling for evaluating impacts of policies and measures to reduce air pollution; nitrogen cycle and nitrogen budget and their importance in agricultural field

Marisa Domingos, MutaGen Brasil, Monte Alegre, Ribeirão Preto, Brazil

Environmental pollution and climatic change effects on natural vegetation, particularly in the tropics and subtropics, air-plant-soil interactions in polluted terrestrial ecosystems, physiologic, metabolic, structural/ultrastructural markers of increased plant tolerance against air pollutants and other environmental stressors, disturbances on nutrient dynamics in polluted terrestrial ecosystems, physiognomic/landscape disturbances in polluted terrestrial ecosystems, the search of innovative biomonitoring technics for evaluating risks posed by air pollutant, ozone, nitrogen and sulfur oxides, particulate matter, fluorine, trace metals, polycyclic aromatic hydrocarbons

Juerg Fuhrer, AGROSCOPE, Zurich, Switzerland

Air pollution and climate change effects on crops, plant communities and agroecosystems, greenhouse gas fluxes in agricultural systems

Jiming Hao, Tsinghua University, Beijing, China

Markus Hauck, Georg-August-Universität Göttingen, Göttingen, Germany

Global change ecology; Climate warming; Eutrophication; Acidic deposition; Heavy metals in terrestrial ecosystems; Land use; Lichen biology

Magali Houde, Environment Canada, Montreal, Quebec, Canada

Aquatic ecotoxicology, organic pollutants, toxicogenomics, biological effects, zooplankton and fish, bioaccumulation, impacts of waste water treatment plant effluent, emerging flame retardants, polyfluoroalkyl substances, marine mammals

Harri Kankaanpää, Finnish Institute of Marine Research, Helsinki, Finland

Takayoshi Koike, Hokkaido University, Sapporo, Japan

Physiological ecology of woody plants (partly including crops) under changing environment (such as elevated ozone, high nitrogen loading, soil acidification, elevated CO₂). My interest is to study on photosynthesis, respiration, growth, allocation of woody plants and plant-insect interaction.

Rai Kookana, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Glen Osmond, South Australia, Australia

Pesticides, environment fate, pharmaceuticals, soil science, fullerene nanomaterials.

Jamie Lead, University of Birmingham, Birmingham, England, UK

Chunyang Liao, Chinese Academy of Sciences, Yantai, China

Emerging organic contaminants, endocrine disrupting chemicals, pesticides, environmental analytical chemistry, environmental behavior and fate, bioavailability, toxicological effects, and risk assessment

Daohui Lin, Zhejiang University, Hangzhou, China

Nanomaterials; Ecotoxicity; Nanotoxicity; Bioavailability; Colloidal behavior; Sorption

Rainer Lohmann, University of Rhode Island, Narragansett, Rhode Island, USA

Passive samplers, POPs, sorption, bioaccumulation, atmospheric chemistry, marine pollution, long-range transport, oceans, black carbon, organic geochemistry.

Stefano Loppi, Università degli Studi di Siena, Siena, Italy

Michael Lydy, Southern Illinois University, Carbondale, Illinois, USA

Pesticides, toxic effects on aquatic systems, pyrethroid insecticides, bioavailability, desorption-based samplers, sediment-associated organic contaminants, honey bees declines.

Shaily Mahendra, University of California at Los Angeles (UCLA), Los Angeles, California, USA

Water treatment, environmental microbiology, environmental biotechnology, microbial ecology, enzymes, biodegradation, bioremediation, molecular biology, biomarkers, nano toxicology.

Andy A. Meharg, Queen's University Belfast, Northern Ireland, Belfast, Northern Ireland, UK

My research is focused around how pollutants & nutrients cycle in the environment. Arsenic biogeochemistry is of particular interest.

Thomas Meinelt, Institute of Freshwater Ecology and Inland Fisheries, Berlin, Germany

Alternative treatments in aquaculture; Impact (and interaction) of humic substances on environment and animals.

Willie Peijnenburg, Universiteit Leiden, Leiden, Netherlands

Risk assessment; Ecological risk assessment; Environmental fate and effect assessment; Nanoparticles; Bioavailability; Metals; Organics; Quantitative structure-activity relationships (QSARs); Transformation of chemical substances; Biodegradation; Abiotic transformations

Elijah J. Petersen, National Institute of Standards and Technology (NIST), Gaithersburg, Maryland, USA
Nanomaterials, carbon nanomaterials, standardization, nanoecotoxicity, carbon nanotubes.

Stergios Pirintsos, University of Crete, Iraklion, Crete, Greece

Biomonitoring of air pollution, trace elements and nitrogen using lichens, climate change issues and lichens, lichens and hydrogen production, lichen physiology and pollution, sensitivity issues of lichens, lichen diversity and vegetation in Mediterranean ecosystems.

Hakan Pleijel, Göteborgs Universitet, Göteborg, Sweden

Ozone (effects on vegetation), carbon dioxide (effects on vegetation), urban ecology (especially air pollution in relation to vegetation), temporal and spatial variation in air pollution exposure, crops (especially effects of air pollutants on growth and nutrient content), deposition of air pollutants, weather and climate dependence of air pollution, climate change effects on crops.

Markus Puschenreiter, Universität für Bodenkultur Wien (BOKU), Vienna, Austria

Heavy metals/trace elements in soils and plants, rhizosphere processes involved in metal/trace element acquisition, soil remediation technologies / phytoremediation

Brian Reid, University of East Anglia, Norwich, England, UK

Soil contamination, biochar, pesticides, HOCs, PAHs, PTEs.

Dibyendu Sarkar, Stevens Institute of Technology, Hoboken, New Jersey, USA

Environmental geochemistry, soil chemistry, environmental quality and remediation, human health risk assessment, green technology.

Jörg Schaller, Universität Bayreuth, Bayreuth, Germany

Cycling of nutrients/silicon and metal(oids), element fixation during litter decomposition, crop plant nutrition and trace element accumulation, invertebrates, silicon effect on metal binding, metal toxicity, carbon turnover, silicon turnover, rare earth element, ecosystem processes, silicon nanoparticles.

Wada Shin-Ichiro, Kyushu University, Fukuoka, Japan

Richard Shore, Centre for Ecology and Hydrology (CEH), Bailrigg, Lancaster, UK

Philip Smith, Texas Tech University, Lubbock, Texas, USA

Ecotoxicology, ecological risk assessment, wildlife toxicology.

Stefania Squizzato, University of Rochester, Rochester, New York, USA

Jordi Sunyer, CREAL, Barcelona, Spain

Filip M.G. Tack, Universiteit Gent, Gent, Belgium

Heavy metals; Trace element biogeochemistry; Dredged materials; Soil and sediment remediation; Phytoremediation

Shu Tao, Peking University, Beijing, China

Doris Vetterlein, Umweltforschungszentrum (UFZ) Leipzig-Halle GmbH, Halle/Saale, Germany

Frank von Hippel, Northern Arizona University, Flagstaff, Arizona, USA

Perchlorate, OC pesticides, PCBs, PBDEs, PFCs, toxic metals (mercury, manganese, copper, arsenic) Ecotoxicology research incorporates molecular (gene expression), organismal (endocrine disruption, developmental disruption, behavior), and ecological approaches (stable isotopes) to solve problems in conservation biology and environmental health. A critical component of several of my larger research projects is community-based participatory research (CBPR) with indigenous people.

Zhenyu Wang, Jiangnan University, Wuxi, China

Environmental geochemistry, toxicology.

Jason White, Connecticut Agricultural Experimental Station, New Haven, Connecticut, USA

Nanotoxicology, food safety, bioremediation and phytoremediation.

Paul Williams, Chinese Academy of Sciences (CAS), Beijing, China

Toxic trace elements, 2D high-resolution chemical imaging, rhizosphere chemistry, soil-plant interactions, diffusive gradients in thin films (DGT), arsenic/selenium biogeochemistry, bioavailability of metals, human health impacts of arsenic, cadmium and lead, urban & sustainable agriculture, advanced analytical approaches for contaminant quantification, soil & water pollution.

Bert Wolterbeek, Delft University of Technology, Delft, Netherlands

Plant physiology, air pollution (methods, effects), (bio)monitoring, radionuclides, kinetics, dynamics, metals, radioecology.

Feng Xiao, University of North Dakota, Grand Forks, North Dakota, USA

Perfluorochemicals (PFCs) and perfluoroalkyl substances (PFASs); Perfluorooctanoate (PFOA) and perfluorooctane sulfonate (PFOS); Biochar, char, soot, black carbon, and activated carbon, absorption.

water chemistry, drinking-water treatment, emerging contaminants and environmental monitoring, geographic Information system; exploratory data analysis; exposure assessment.

Scott Young, Nottingham, Nottingham, UK

Bioavailability, speciation and mobility of trace metals and radioisotopes in the environment and specifically with the geochemical controls over trace element deficiency and toxicity.

Shuzhen Zhang, Chinese Academy of Sciences (CAS), Beijing, China

soil contamination; Sorption/desorption of organic contaminants; Bioaccumulation and transformation of organic contaminants in the terrestrial environment; Applications of synchrotron-based spectroscopy techniques in environmental chemistry, NOM analysis and effects on contaminant behaviors

Fangjie Zhao, Nanjing Agricultural University, Nanjing, China

Biogeochemistry of trace elements, uptake and detoxification of heavy metals in plants, bioremediation.

GUIDE FOR AUTHORS

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Introduction

Environmental Pollution is an international journal that seeks to publish papers that report results from original, novel research that addresses significant environmental pollution issues and problems and contribute new knowledge to science. The editors welcome **high-quality, process-oriented, hypothesis-based** papers along these lines. The scopes for publication include, but are not limited to: Papers where the pollutants are clearly defined and measured in environmental compartments, food and food-related items, and human bodies, and can be directly related to biological, ecological and human health effects or with respect to climate change; Papers on new techniques for study and measurement of pollutants and their effects; Papers on new types of environmental challenges such as pollution/antibiotic resistances of organisms; Papers on contaminants of emerging concern, such as emerging chemicals, microplastics, electronic wastes, light or noise pollution, as long as they can clearly be related to the biological effects mentioned above; Papers on modeling, but these must be related to a specific pollution issue or process that is potentially of environmental and/or human health interest; Papers on innovative techniques to combat global or regional problems, if the field applicability of the technical aspects are clearly demonstrated; Critical review papers and commentaries; Letters to the editor. The editors do not wish to publish papers on: Routine surveys and monitoring programs primarily of local or regional interest (i.e., they must have international interest, such as the characterization of processes that can be applicable elsewhere); Descriptions of well-known contaminants, such as legacy pollutants, in yet another location; Sewage, waste and wastewater treatment and management; Standard techniques in agronomy, remediation, biomonitoring, bioremediation and phytoremediation; Known analytical methods, laboratory experiments, food science studies, screening of new plant/animal/microorganism species for effect assessments, or testing of known pollution or chemicals in another setting; Atmospheric models without clear environmental or human health implications; Nitrogen or phosphorus deposition or biogeochemical processes without clear environmental implications; Natural radiation studies without clear environmental or human health perspectives; Eutrophication studies and secondary pollution by eutrophication; Ocean enrichment by CO₂

Papers along such lines are subject to being returned to the author without review. The abstract (up to 300 words), highlights and conclusions of papers in this journal must contain clear and concise statements. A graphical abstract is mandatory. A cover letter is required. This must explicitly express how the submission fits the Aims and Scope of *Environmental Pollution*, and should establish the ramifications of the research findings with regards to environmental quality, ecological health, and/or human health. The cover letter should also list a minimum of five suggested reviewers, as detailed below. Failure to include such justifications in the cover letter may result in returning the paper to the author.

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BEFORE YOU BEGIN

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Submission

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