DESCRIPTION

Beginning in 2019, Environment International became an open access journal and further expanded its scope into new areas of research to become a multi-disciplinary journal publishing high quality and novel information within the broad field of 'Environmental Sciences'.

Coverage includes, but is not limited to, the following research topics:
1) Public Health and Health Impact Assessment, Environmental Epidemiology (Prof. Mark Nieuwenhuijsen)
2) Environmental Health and Risk Assessment, Environmental Chemistry (Prof. Adrian Covaci)
3) Environmental Monitoring and Processes, Environmental Microbiology and Toxicology (Prof. Yong-Guan Zhu)
4) Environmental Technology (Prof. Zhen Jason He)

The journal has published before on many of the above mentioned topics, and thus they are familiar to authors, readers, reviewers and editors. In particular, the following specific topics are welcome (non-exhaustive list), as long that they have a strong environmental aspect and applicability and if they discuss "interactions between environment and humans" in the broad sense.

1) Public Health and Health Impact Assessment, Environmental Epidemiology (Prof. Mark Nieuwenhuijsen)
   The section overseen by Prof. Nieuwenhuijsen will cover novel topics related to the exposure assessment and epidemiology of indoor and outdoor air quality, noise, green space, temperature and other environmental exposures, the assessment and health effect of urban and transport planning and the built environment. We also welcome innovative research on women, children, migrants and elderly as specific and vulnerable sub-populations. Other topics of interest relate to the health implications and impacts of climate change with specific reference to sustainable development, including planetary health and urban health.

2) Environmental Health and Risk Assessment, Environmental Chemistry (Prof. Adrian Covaci)
   The section overseen by Prof. Covaci covers novel topics related to the assessment, modelling and impact of chemicals of emerging concern on human exposure and human exposome in general, which are important in environmental and health risk assessment. We also welcome novel and innovative approaches for human biomonitoring and environmental "omics", for a broad range of Persistent Organic Pollutants, Endocrine Disruptors and Emerging Contaminants, including microplastics. These
tools are pivotal for the correct evaluation of source apportionment, exposure, fate, bioavailability, and biotransformation of environmental and food contaminants. We also want to attract innovative papers investigating the link between ecosystem health and human health and their input on the chemicals policy and regulation. We strongly encourage the submission of systematic reviews related to environmental and human health risk assessment.

3) Environmental Monitoring and Processes, Environmental Microbiology and Toxicology (Prof. Yong-Guan Zhu)
The section overseen by Prof. Zhu will cover environmental processes, ecotoxicology and environmental microbiology. For environmental processes, we welcome novel and innovative research submissions addressing biogeochemical processes in terrestrial and aquatic ecosystems, and their influence on the status and fate of contaminants and nutrients. Under the topic of ecotoxicology, we will cover novel areas of toxicological studies, particularly on molecular mechanisms of emerging contaminants and population dynamics under contamination. We also welcome papers on environmental microbiology, addressing fundamental interactions between environmental conditions and microorganisms, both ecology and molecular mechanisms; and the dynamics of microbial genes in the environment.

4) Environmental Technology (Prof. Zhen Jason He)
The Environmental Technology section, overseen by Prof. He, responds to increasing attention on technological solutions which will lead to an improvement of our environment and quality of life in general. We will consider innovative research on, but not limited to: technologies for minimizing and treating contaminants, and/or maximizing recovery of valuable resources from wastes such as energy, nutrients, and water; technologies for sensing and monitoring the quality of water, air, and other environmental compartments; and technologies for analyzing emerging contaminants via chemical and microbiological methods. We welcome both applied and fundamental research that develops novel and innovative technologies with a strong environmental application potential, that address key limitations of existing technologies, and/or demonstrate technologies in the real world using methods with strong scientific merit. We are particularly interested in interdisciplinary research that connects environmental technologies to public and environmental health, resource recovery, social economics, and sustainability.

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Human exposure; Exposure assessment; Human health effects; Biomarkers; Food safety; Biomonitoring; Indoor pollution; Emerging contaminants; Legacy contaminants; Wastewater epidemiology
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Public Health, Environmental Epidemiology & Health Impact Assessment
Environmental epidemiology; Environmental exposure assessment; Health impact assessment; Air pollution; Green space; Noise; Temperature; Built environment
Zhen (Jason) He, Washington University in St. Louis, Department of Energy, Environmental and Chemical Engineering, St. Louis, Missouri, United States
Environmental Technology
Water pollution and treatment; Environmental biotechnology; Resource recovery from wastes; Bioelectrochemical systems; Bioenergy; Membrane technology; Bioremediation; Desalination
Yongguan Zhu, Chinese Academy of Sciences, Beijing, China

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Research Interests: Human biomonitoring; environmental epidemiology; exposure; risk assessment
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Environmental Chemistry, Analytical Chemistry, Persistent Organic Pollutants, Emerging Contaminants, Ecotoxicology, Environmental Health, Children’s Health, Environmental Epidemiology
Martí Nadal, Universitat Rovira i Virgili, Lab.Toxicology and Environmental Health, Reus, Catalonia, Spain
Heavy metals, Persistent Organic Pollutants, Polycyclic aromatic hydrocarbons, Emerging Pollutants, Human exposure, Health risk assessment, Waste management, Food toxicity, Dietary intake, Environmental monitoring, In-silico tools, Environmental toxicology
Shoji F. Nakayama, National Institute for Environmental Studies, Japan Environment and Children’s Study Programme Office, Tsukuba, Japan
Research Interests: Public health, Environmental health, Children’s environmental health, Biomonitoring, Exposome, Contaminants of emerging concern, Perfluoroalkyl substances (PFAS)
Heather Stapleton, Duke University, Durham, North Carolina, United States
Environmental Chemistry, Human Exposure, Children’s Environmental Health, Metabolism and Biotransformation, Halogenated Persistent Pollutants, Endocrine Disruptors, Flame Retardant Use & Exposure, In Vitro Assays for Thyroid Disruption.

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Hefa Cheng, Peking University, Beijing, China
Environmental geochemistry; Heavy metals; Environmental monitoring; Health risk assessment; Food safety; Soil pollution; Waste management; Environmental transport and fate of pollutants; Waste treatment and disposal
Frederic Coulon, Cranfield University, Cranfield, Bedford, United Kingdom
Remediation, hazardous waste, water and wastewater treatment; Risk assessment and remediation; Bioaerosols; Hydrocarbons; Environmental microbiology; Antarctic science

Environmental Technology
Thanh Huong (Helen) Nguyen, University of Illinois at Urbana-Champaign, Champaign, Illinois, United States
Water and food safety; Disinfection; Water distribution system; Hydroponics; Aquaponics
Guo-Ping Sheng, University of Science and Technology of China, Hefei, China
Biological wastewater treatment; Water reuse technique

Public Health, Environmental Epidemiology & Health Impact Assessment
Hanna Boogaard, Health Effects Institute, Boston, Massachusetts, United States
Air pollution epidemiology; Exposure assessment; Accountability research; Systematic reviews
Zorana Jovanovic Andersen, University of Copenhagen, Copenhagen, Denmark
Environmental epidemiology; Health effects related to air pollution exposure; Health effects related to road traffic noise exposure; Health effects related to wind turbine noise exposure; Health effects of green and blue spaces
Xavier Querol, Institute of Environmental Assessment and Water Research, Barcelona, Spain
Environmental geochemistry; Air quality; Atmospheric aerosols; Tropospheric ozone; Black carbon; Ultrafine particles; Metals; Organic pollutants; Inorganic gaseous pollutants, NO2, NO, NOx, SO2, SO3, CO, NH3; Source apportionment; Urban and regional pollution; Atmosphere and climate change; Air quality policy; Mobile, industrial, domestic and agricultural emissions of air pollutants; Leaching of industrial wastes; Impact of mining on environment; Recycling of industrial wastes; Coal use related pollution

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Systematic review; Evidence mapping; Machine learning; Chemical risk assessment; Research standards

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Environmental analysis; Water and soil quality; Organic mass spectrometry; Emerging organic contaminants; Nanomaterials; Biosensors for: Analysis, Fate and Risk of Emerging Pollutants such as Pharmaceuticals and Nanomaterials in the Environment Water Pollution Control and Protection Bridging analytical chemistry with ecotoxicology- toxicity identification; Evaluation techniques used: GC and LC tandem MS, biosensors, sample preparation, automated on-line techniques for water analysis environmental samples (water, including marine waters, sediments soils, biota samples)
Linda Birnbaum, National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina, United States
Environmental Toxicology, Dioxin, Endocrine Disruptors, BPAs, Flame Retardants
Julian Blasco, Institute of Marine Science of Andalucia, Puerto Real, Spain
Metals; Pharmaceuticals; Nanoparticles; Pollution; Ecotoxicology; Risk assessment; Seawater; Sediment
Michael Bloom, University at Albany Department of Environmental Health Sciences, Rensselaer, New York, United States
Research Interests: Environmental Epidemiology; Reproductive Epidemiology; Endocrine Disruptors
Research Interests: Human-Biomonitoring, Exposure Assessment, Risk Assessment, Endocrine Disruptors, Analytical Methods

**Judy LaKind**, LaKind Associates LLC, Catonsville, Maryland, United States
Biomonitoring; Risk assessment; Exposure to chemicals; Systematic reviews; Data quality

**Christopher Lau**, US Environmental Protection Agency National Health and Environmental Effects Research Laboratory, Research Triangle Park, North Carolina, United States
Characterizing the chemically induced reproductive toxicity and developmental toxicity during embryonic and perinatal life stages, understanding of their modes of action, and applying such information to human health risk assessment

**Dan Li**, Fudan University, Shanghai, China
Toxicology, genotoxicity, telomeres, PCBs, PAHs, Benzene, Quinones, mechanisms-of-action

**Lena Ma**, Zhejiang University College of Environment and Resources Studies, Hangzhou, China
Biogeochemistry of trace metals in soils, wastes, and plants; Soil contamination and remediation; Phytoremediation; Chemical stabilization; Metal speciation; Metal bioavailability and bioaccessibility; Metal exposure and human health; Plant metal uptake and transport; Microbial transformation of metals; Metal availability and food safety

**Nancy Bixian Mai**, Institute of Geochemistry Chinese Academy of Sciences, Guiyang, China
Persistent organic pollutants (POPs); Bioaccumulation; atmosphere; Sediment; Environmental fate and transfer; Exposure and risk assessment

**Mandana Mazaheri**, New South Wales Department of Planning and Environment, Sydney, Australia
Urban air quality; Human and environmental exposures; Green spaces and their health impacts

**Lidia Mínguez-Alarcón**, Harvard University T H Chan School of Public Health, Boston, Massachusetts, United States
Endocrine Disrupting Chemicals; Interactions diet-chemicals; Environmental mixtures; Environmental epidemiology; Reproductive epidemiology; Male infertility

**Luke Naehler**, The University of Georgia, Athens, Georgia, United States
Diffuse microbial pollution from agriculture; modelling & decision support in environmental systems; fate & transfer of human pathogens; recreational water quality

**Spyros G. Pavlostathis**, Georgia Institute of Technology, Atlanta, Georgia, United States
Environmental biotechnology; Bioprocess engineering; Wastewater treatment; Anaerobic digestion; Biotransformation; Bioremediation; Bioenergy and biofuels; Bioelectrochemical systems; Kinetics and modeling

**Nuno Ratola**, University of Porto, Porto, Portugal
Environmental presence and behaviour of legacy and emerging organic contaminants; Biomonitoring and chemical transport of chemicals; Advanced analytical techniques of extraction and quantification; Field sampling campaigns and sample handling protocols; Exposure assessment and prioritisation of relevant compounds; Climate change scenarios

**Heqing Shen**, Institute of Urban Environment Chinese Academy of Sciences, Xiamen, China
Biological monitoring (Bio-monitoring); Endocrine disrupting chemicals; Human microbiome; Birth cohort; Male fertility; Biomarkers; Epigenetics; OMICS with emphasis toxicometabolomics

**Ashlynn S. Stillwell**, University of Illinois at Urbana-Champaign, Champaign, Illinois, United States
Water resources; Energy systems; Policy; Urban water; Sustainability

**Nico M. van Straalen**, VU Amsterdam, Amsterdam, Netherlands
Nanothechnology in Real Samples (in special nanominerals and advanced electron bean); Soil and water researches; Atmosphere impacts (in special particulate matter)

**Christian Sonne**, Aarhus University Department of Environmental Science, Roskilde, Denmark
Biological effects, environmental chemicals, infectious diseases, climate change, veterinary science, wildlife medicine, predatory mammals, raptorial birds, sea birds, fish, internal organs, reproductive organs, histopathology, morphology, skeletal system, bone density, immune system, endocrinology, PBPK modelling, blood biochemistry, implantation of PTT satellite transmitters, immobilization.

**Massimo Stafoggia**, Local Health Authority Rome 1 Department of Epidemiology, Rome, Italy
Exposure assessment; statistical methods; air pollution; epidemiology; study design

**Ashlynn S. Stillwell**, University of Illinois at Urbana-Champaign, Champaign, Illinois, United States
Water resources; Energy systems; Policy; Urban water; Sustainability

**Nico M. van Straalen**, VU Amsterdam, Amsterdam, Netherlands
Nanothechnology in Real Samples (in special nanominerals and advanced electron bean); Soil and water researches; Atmosphere impacts (in special particulate matter)
Analytical Chemistry; Ecotoxicology; Molecular Toxicology; Environmental Monitoring; Risk Assessment; Human studies; Organic Contaminates; Flame Retardants; Urinary Biomarkers; Metabolites; Gas Chromatography-Mass Spectrometry (GC-MS); Lipid Chromatography-Mass Spectrometry (LC-MS)

**Phong K. Thai**, The University of Queensland Queensland Alliance for Environmental Health Sciences, Woollongabba, Queensland, Australia
Wastewater analysis; Water quality; Air quality; Air pollution; Environmental monitoring; Environmental health

**Shilu Tong**, Shanghai Jiao Tong University - Fahua Campus, Shanghai, China
Environmental epidemiology, climate change, planetary health, sustainable development, quantitative risk assessment, spatiotemporal modelling

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Exposure assessment, pharmacokinetic modeling, environmental epidemiology, persistent organic pollutants, risk assessment

**Jun Wu**, University of California Irvine, Irvine, California, United States

**Zuxin Xu**, Tongji University, Shanghai, China
Modelling & decision support in environmental systems; Urban and regional water quality; Water pollution control of river system; Urban sewage system planning; Aquatic Ecosystem management

**Zhiguo Yuan**, University of Queensland, Advanced Water Management Centre, Queensland, Australia
Wastewater. Modelling, BNR, Biogas, Sewer

**Kai Zhang**, University of Texas Health Science Center at Houston Department of Epidemiology Human Genetics and Environmental Sciences, Houston, Texas, United States
Air quality; Built Environment; Climate Change and Health; Environmental and Occupational Epidemiology; Exposure assessment; Exposome; GIS; Urban Health; Statistics

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3. Correspondence is encouraged. Opinions, perspectives and insight on articles published in Environment International are very welcome.

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