DESCRIPTION

Chemosphere is an international journal designed for the publication of original communications as well as review articles on chemicals in the environment. Chemosphere, as a multidisciplinary journal, offers maximum dissemination of investigations related to all aspects of the identification, quantification, behavior, fate, toxicology, treatment, and remediation of chemicals in the bio-, hydro-, litho- and atmosphere.

Chemosphere will publish:
- Original communications (Research Papers) describing important new discoveries or further developments in important fields of investigation
- Review Articles, mainly of new developing areas
- Short communications
- Letters to the Editor
- Special, themed issues on relevant topics

All papers should demonstrate a high level of novelty, originality and uniqueness. The following sections and subject fields are included:

Environmental Chemistry

This section will publish manuscripts dealing with fundamental processes in the environment that are related to the analysis, behavior, fate, and alteration of organic and inorganic contaminants focused on the dynamics of contaminants in environmental compartments such as water, soil, sediment, particulate matter, organisms, dust and indoor/outdoor air. Only studies that are of significance to an international audience, include sites of particular global interest, or lend themselves to interpretation at the global level should be submitted.

Topics of specific interest include, but not limited to, are:
- All aspects of emerging contaminants, such as pharmaceuticals, pesticides, flame retardants, other industrial chemicals, persistent organic pollutants, endocrine disruptors, etc.
- All aspects of trace metals, organometals, metalloids (e.g., arsenic) and radionuclides
- Environmental fate studies including transport, biodegradation, bio-accumulation and/or deposition, atmospheric (photo)chemical processes, hydrolysis, adsorption/desorption
- Transformation and mineralisation of chemicals (e.g., by bio- and photo degradation, redox processes and hydrolysis)
- Novel environmental analytical methods including case studies
• Environmental modelling and quantitative structure-activity relationships to study fate and environmental dynamics
• Monitoring studies presenting new strategies, report of novel contaminants, findings or interpretations of interest for an international readership.
• Passive sampling
• Non-target and suspect screening (e.g. effect-directed analysis)
• Natural marine toxins

The following studies are not considered for publication: studies on (micro)organisms (unless chemicals are clearly involved), monitoring studies based on standard methodology, and/or only of regional importance, studies dealing only with nutrients in agricultural ecosystems, pesticide application studies, plant physiology studies, studies on improvement of crops and purely analytical methodology studies. As regards papers on air pollution, we focus on contaminants in air, particulate matter studies and also consider papers on NO\textsubscript{x}, SO\textsubscript{x} or ozone.

**Toxicology and Risk Assessment**

The section on Environmental Toxicology and Risk Assessment covers all aspects of toxicology, i.e., the science of adverse effects of chemicals on living organisms including humans, and the scientific risk assessment.

Topics of specific interest include, but not limited to, are:
• Adverse effects of chemicals in environmental, aquatic and terrestrial, organisms
• Similar studies in experimental organisms (under laboratory conditions)
• Epidemiological studies on effects of chemicals in humans
• Biochemical studies related to mechanisms of adverse effects
• Toxicokinetics and metabolic studies on chemicals related to adverse effects
• Development and validation of testing methods based on living organisms or biological materials
• Nanoparticles, nanocomposites, and microplastics in the environment
• Adaptation
• Human biomonitoring
• Elucidation of mechanisms of toxic effects
• DNA and protein adducts
• In vitro assays and omics techniques
• Phytotoxicity

Not considered are, e.g., studies that report only concentrations of chemicals in the environment, living organisms, food or other materials etc. and studies on biochemical effects of chemicals non-relevant to toxicology.

**Treatment and Remediation**

This section deals with papers about technologies that manage and/or reduce environmental contaminants, including reuse and recycling processes. The technology must be beyond a basic laboratory study or have obvious implications for current or potential treatment or remediation technologies and, for example, for any advanced oxidation process, the intermediates and/or the extent of mineralization of the targeted compound(s) and wastes must be quantified.

Topics of specific interest include, but not limited to, are:
• Advanced water and wastewater treatment processes and sludge management
• Produced water
• Drinking water
• Incineration
• Remediation including bio/phytoremediation employing new strategies
• Hydraulic fracturing
• Use of biochar amended soil to bind (e.g., herbicides)
• Nanotechnology
• Advanced oxidation processes
• Photolysis/photocatalysis and electrochemical and photo-assisted electrochemical methods
• Sonolysis/sonocatalysis
• Mechanochemical destruction (MCD)
• Natural treatment systems (riverbank filtration and aquifer recharge/recovery)
• Characterization of natural and effluent organic matter
• Technologies for recycle/reuse (e.g., of microbial fuel cell techniques)
• Gasification/pyrolysis for biomass-to-energy and energy recovery from waste streams

Not considered are studies that focus on the synthesis of new materials to be used in waste water purification or remediation. Studies focusing on the removal of single contaminants are often less interesting for publication.

AUDIENCE

Environmental scientists, chemical engineers, biologists, toxicologists.

ABSTRACTING AND INDEXING

PubMed/Medline
Environmental Periodicals Bibliography
Analytical Abstracts
Aqualine Abstracts
BIOSIS Citation Index
Elsevier BIOBASE
Cambridge Scientific Abstracts
Current Contents - Agriculture, Biology & Environmental Sciences
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Non-dl-POPs, FRs, levels, trends, analytical methods, food chain accumulation, interlab studies, biomonitoring, fate, exposure, fish, shellfish toxins
Tamara Galloway, University of Exeter, EX4 4QJ, Exeter, United Kingdom
Nanopolymers and nanocomposites, microplastics as marine pollutants, ecotoxicology, adaptation, oil fracking and drilling, human biomonitoring
Yeomin Yoon, University of South Carolina, 29208, Columbia, South Carolina, United States of America
Water treatment, Membrane filtration, Adsorption, Sonodegradation, Oxidation, Micropollutants, Nanotechnology

Special Issues Editor
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Environmental chemistry, Biogeochemistry, Bioaccumulation, Persistent organic pollutants, Chemicals of emerging concern, Chemical inventories, Mercury, Polycyclic aromatic compounds, Arctic, Marine mammals, Fish

Associate Editors
Environmental Chemistry
Xinde Cao, Shanghai Jiao Tong University - Fahua Campus, Shanghai, China
Soil remediation, contaminant removal from water, flue gas, metal speciation, metals in soil, bioavailability and human health, arsenic, phosphate, development, application of solid waste-derived environmentally functional materials, biochar, recycling, groundwater
Ralf Ebinghaus, Helmholtz-Zentrum Hereon, Geesthacht, Germany
Atmosphere, particles, mercury, emerging contaminants, PFAS,
Milena Horvat, Jozef Stefan Institute, Ljubljana, Slovenia
Radionuclides, essential and potentially toxic elements metals, speciation, mercury, environment and health, biogeochemistry, marine environment, metrology contaminated sites, food contaminants,
Magali Houde, Montreal, Canada
POPs, PFAS, flame retardants, emerging compounds, Bioaccumulation/biomagnification, Toxicogenomics, Arctic Marine mammals
Petra Krystek, University of Siegen, Siegen, Germany
Trace elements, (nano)materials, speciation, (hyphenated) analytical techniques, method development, validation, environment, health, exposure, water emissions, sustainability
Lena Q. Ma, Zhejiang University College of Environmental and Resource Sciences, Hangzhou, China
Biogeochemistry of trace metals, Phytoremediation and hyperaccumulation, Bioavailability and bioaccessibility, Human health and food safety, Plant metal uptake, Rhizosphere chemistry, Root exudates, Microbial transformation of metals, Metal transports in plants, Metal detoxification in plants and microbes
Keith Maruya
Emerging contaminants, persistent organic pollutants, mass spectrometry, passive sampling, bioanalytical screening, contaminated sediments, bioaccumulation, trophic transfer
Volker Matthias, Helmholtz Centre Hereon Institute of Coastal Environmental Chemistry, Geesthacht, Germany
Atmospheric chemistry, aerosol particles, air pollution, numerical modeling, emissions (both natural and anthropogenic), NOx, SOx
Derek Muir, Environment and Climate Change Canada, Aquatic Contaminants Research Division, Burlington, Ontario, Canada
Environmental chemistry, Biogeochemistry, Bioaccumulation, Persistent organic pollutants, Chemicals of emerging concern, Chemical inventories, Mercury, Polycyclic aromatic compounds, Arctic, Marine mammals, Fish
Patryk Oleszczuk, Maria Curie-Sklodowska University, Lublin, Poland
Biochar; organic contaminants; heavy metals; polycyclic aromatic hydrocarbons; nanoparticles; sewage sludge; ecotoxicology; remediation
Myrto Petreas, California, Department of Toxic Substances Control Berkeley Laboratory, Berkeley, California, United States of America
Levels, trends, dl-POPs, BFRs, analytical methods, bioaccumulation, biomonitoring, exposure assessment, emission, production, generation
Toxicology and Risk Assessment
Michael Bank, Institute of Marine Research, Bergen, Norway
Mercury, microplastics, ocean health, seafood safety, ecotoxicology, isotopic niches, Bayesian modeling, contaminants
Andreas Gies, Federal Environmental Agency Berlin City Campus, Berlin, Germany
Bioassays, human biomonitoring, ecotoxicology, epidemiology, indoor air, oil fracking and drilling
Giulia Guerriero, University of Naples Federico II, Napoli, Italy
Antioxidative physiological defence, steroids and steroid receptors, antioxidants under steroid control, non-invasive environmental monitoring, remediation assessment, biodiversity conservation microarrays, reproductive health assessment, reprotoxicity monitoring
Jian-Ying Hu, Peking University College of Urban and Environmental Sciences, Beijing, China
Nynke Kramer, Wageningen University & Research, Wageningen, Netherlands
Toxicokinetics, Next generation risk assessment, In vitro toxicology, PBPK modelling, Toxicology, Pharmacokinetics, Chemical safety assessment, Ecotoxicology
James Lazorchak, United States Environmental Protection Agency, Washington, District of Columbia, United States of America
Effect of EDCs on fish populations; Estrogenicity of WWTP discharge; G expression; Toxicity effects on a population; Invasive toxic algae; DNA and protein adducts; Impact of coal; Mineral, gas and oil extraction; Pharmaceuticals; Water quality criteria, Ecotoxicology, Cyanotoxins, Microplastics
Alvine Mehinto, Southern California Coastal Water Research Project, Costa Mesa, California, United States of America
Cell bioassays, Transcriptomics, Ecotoxicology, Fish physiology, Ecological risk assessment, Emerging contaminants, Microplastics
Marisa Passos, European Commission Joint Research Centre Ispra, Ispra, Italy
Ecotoxicology, toxic effects of environmental contaminants on aquatic organisms, bioaccumulation studies (phyto-/zoo- plankton, bivalves, zebrafish embryos), nanotoxicity, in vitro cytotoxicity, FET assay, nano-/micro- plastic particles, nanomaterials, nanoparticles, EDCs.

**Willie Peijnenburg**, Leiden University Institute of Environmental Sciences, 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, Pollutants, fate, toxicity, LCA, Persistent chemicals, Modeling, Predictive toxicology, Soil pollution, Water pollution, Nanomaterials, Microplastics

**Frederik-Jan van Schooten**, Maastricht University, Maastricht, Netherlands

**Treatment and Remediation**

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Anodic oxidation; Electrochemical advanced oxidation processes; Electro-Fenton; Photoelectrocatalysis; Photoelectro-Fenton

**Teresa J. Cutright**, University of Akron, Akron, Ohio, United States of America

Bioresmediation, phytoremediation, environmental engineering

**Sergi Garcia-Segura**, Arizona State University, Tempe, Arizona, United States of America


**Jun Huang**, Tsinghua University, Beijing, China

Advanced oxidation processes (AOPs), advanced reduction process (ARPs), photochemistry, mecanochemistry, per- and polyfluoroalkyl substances (PFAS)

**Am Jang**, Sungkyunkwan University College of Natural Science, Suwon, South Korea

Resources Recovery, FO, RO, Water Reuse, Fouling

**Hyunook Kim**, University of Seoul, Department of Environmental Engineering, Seoul, South Korea

Biological removal of organic compounds, nutrient removal, analysis and degradation of trace organics, odorants from water/wastewater

**Yongmei Li**, Tongji University, Shanghai, China

Removal and recovery of phosphorus; biological nitrogen removal; anaerobic fermentation of biosolids; fate and attenuation of emerging organic contaminants

**Tsair-Fuh Lin**, National Cheng Kung University, Tainan, Taiwan

Identification, treatment, and process modeling relevant to cyanobacteria, taste and odor compounds and cyanotoxins present in reservoirs and water treatment plants, monitoring and treatment of arsenic and chlorinated hydrocarbons in ground water

**Grzegorz Lisak**, Nanyang Technological University, Singapore, Singapore

Waste to energy, Waste to materials, Circular economy, Waste management, Soil remediation, Municipal solid wastes, Gasification, Pyrolysis, Application of waste derived materials, Waste upcycling and recycling

**Yu Liu**, Nanyang Technological University, Singapore, Singapore

Energy- and carbon-neutral municipal wastewater reclamation, Aerobic and anaerobic membrane bioreactors, Integrated mainstream anammox processes, Circular economy-driven energy and resource recovery from biosolids, Biofilms and microbial granulation

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Electrochemical wastewater treatment, Electrochemical oxidation, Photochemistry, Removal of emerging contaminants from (waste)water, Physicochemical wastewater treatment processes, Advanced wastewater treatment

**Adalberto Noyola**, National Autonomous University of Mexico, Ciudad de México, Mexico

Biological wastewater treatment, anaerobic process for wastewater and sludge treatment, biological nitrogen removal, biofiltration of odorous gases, control of GHG emissions from wastewater treatment facilities

**Chang Min Park**, Kyungpook National University, Daegu, South Korea

Sustainable development of multifunctional nanostructures, Environmental remediation, Fate processes of engineered and Natural nanomaterials

**Chang-Ping Yu**, National Taiwan University, Taipei, Taiwan

Environmental biotechnology, biodegradation, microbial electrochemical technology, biological wastewater treatment, bioremediation

**Xiangru Zhang**, Treatment and Remediation, Chemosphere, Hong Kong University of Science and Technology Department of Civil and Environmental Engineering, Kowloon, Hong Kong, China

Water treatment, drinking water, emerging compounds, disinfection byproducts
Editorial Board

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Development and reproduction under anthropogenic stress, Metals, nanoparticles – toxicity/risk assessment, Oxidative stress and DNA damage, Ecotoxicology, Phenotypic plasticity, acclimation/adaptation in the light of environmental pollution

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Particle Engineering, Inhalable Aerosols, Spray Drying, Encapsulation of Bioactive Compounds

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Mechanochemistry, Emerging Contaminants, Materials for Wastewater Clean-up, Adsorption, POPs, Mechanochemical Destruction

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disinfection by-products, fate of micropollutants in the aquatic environment and water treatment processes, ozonation, advanced oxidation

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Environmental Exposure, Metabolomics, Exposome, Environmental Toxicology, Mixture Effect

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Environmental organic chemistry, contaminated sediment, fate and transport modeling, persistent organic pollutants, passive sampling

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Persistent Organic Pollutants and Dioxins

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Water treatment, Disinfection byproducts, Emerging micropollutants, Toxicity risk assessment

Tom Harner, Environment and Climate Change Canada, Gatineau, Quebec, Canada
Persistent Organic Pollutants and their environmental fate, transport and passive sampling methods

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Treatment Technologies for PCBs and Arsenic, Toxicology, Antibiotics and Antimicrobial Resistance, Microplastic pollution, E-waste Pollution

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dioxins, PCBs, transfer, bioassay, PFASs, analysis, risk assessment, exposure assessment

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Water Treatment, Natural Organic Matter, Disinfection Byproducts, Stormwater Treatment, Nutrient Removal

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Arctic, emerging contaminants

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High-resolution mass spectrometry for targeted and non-target chemicals, Passive sampling, Occurrence and fate of emerging contaminants, Biomonitoring, Environmental chemistry

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Trace metals, organometals, metalloids, radionuclides, analytical techniques, geochemical cycling, metals and human health, gel diffusion techniques, for in situ trace metal speciation DGT (diffusive gradients in thin films) and DET (diffusive equilibrium in thin films), mining

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PFASs; BFRs; dioxins/PCBs; Fish; Exposure assessment; Human biomonitoring; Analytical techniques; Interlaboratory studies; Effect-directed analysis; Food safety
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metabolomics, analytical chemistry, flame retardants, dust

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Soil washing, phytoextraction, immobilisation of toxic elements, metals in soil, metals bioavailability and bioaccessibility, soil functioning, soil ecosystem services

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Metal bioavailability and bioaccessibility in soil, dust, food, human metal exposure and health risk, in vivo and in vitro methods, factors influencing metal bioavailability, strategies to decrease metal bioavailability

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HPLC-MS, Water disinfection byproducts, Toxicology, Water Disinfection byproducts, Analytical and Environmental Toxicology

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Membrane-based water treatment process, Membrane fouling, Drinking water treatment, Water reuse, Advanced oxidation

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Advanced Oxidation Process (AOP), Metal-Organic Frameworks (MOFs), Photoelectrochemical Water Splitting, Water Harvesting, Emerging Contaminants

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PFAS degradation, UV-based reduction

Jian Lu, Yantai Institute of Coastal Zone Research, Yantai, China
Emerging contaminants; Endocrine-disrupting chemicals; Antibiotics and heavy metals; Antibiotic resistance genes; Microplastics; Biodegradation; Persistent organic pollutants; Fate and transport; Coastal and marine pollution; Aquaculture and pollution

Zhi Luo, Huazhong Agriculture University College of Fisheries, Wuhan, China
Aquatic Animals, Molecular Toxicology, Molecular Nutrition, Risk Assessment of Potential Toxicants

Xiang-Zhou Meng, Tongji University, Shanghai, China
Persistent organic pollutants; wastewater; sewage sludge; soil; occurrence; fate; risk assessment

William Mitch, Stanford University, Department of Civil and Environmental Engineering, Stanford, California, United States of America
Environmental organic chemistry, disinfection byproduct formation mechanisms, nitrosamines, other research interests include the formation of nitrosamines formed by the reaction of NOx with amines used to capture CO2 from power plants, the effect of halides on the natural (i.e., sunlight) or engineered (i.e., advanced oxidation) photodegradation of contaminants, and the reductive transformation of contaminants sorbed to black carbons.

Hyo-Bang Moon, Hanyang University, Seongdong-gu, South Korea
Persistent organic pollutant, Emerging contaminant, Bioaccumulation, Human biomonitoring, Non-target analysis

Catherine Munschy, French Research Institute for the Exploitation of the Sea Atlantic Centre, Nantes, France
Persistent Organic Pollutants, Contaminants of Emerging Concern, Marine Ecosystems, Trophic Webs, Bioaccumulation, Biomagnification, Top predator fish

Hai Tran Nguyen, DuyTan University Institute of Fundamental Science and Application, Da Nang, Viet Nam
Adsorption, nanomaterial, water treatment, water pollution, waste management

Pongsak Noophan, Kasetsart University, Bangkok, Thailand
biological treatment processes

Guillermo Quijano, National Autonomous University of Mexico Research Laboratory of Advanced Water Treatment Processes, Querétaro, Mexico

Gerhard Rimkus, Intertek Caleb Brett Germany GmbH, Hamburg, Germany
Synthetic fragrances and personal care products in the environment; Bioaccumulation and metabolism in biota like fish, seals, birds etc.; Bioaccumulation in human tissue/breast milk; Analysis of contaminants in biota and food samples; Residues and contaminants in food, EU food legislation

Paolo Roccaro, University of Catania, Catania, Italy
Water quality, removal of micro-pollutants from water, Formation and control of disinfection byproducts (DBP) in water, Removal and control of contaminants of emerging concern (CEC) in water and wastewaters systems, Wastewater treatment and reuse, Monitoring and modeling trace contaminants in water by spectroscopy, soil and aquifer remediation, Water quality management in precision farming, Waste valorization, Human exposure to airborne contaminants

Rosaria Sciarrillo, University of Sannio, Benevento, Italy
Thyroid, neurotox, nonylphenol effects, western blotting, phytoremediation, marine sediment, reptiles

**Virender K Sharma**, Texas A&M University, College Station, Texas, United States of America
Advanced Oxidation Processes, Ferrate, Nanomaterials, Engineered and Natural Nanoparticles, Disinfection Byproducts, Remediation, Environmental Persistence Free Radicals

**Liguo Shen**, Zhejiang Normal University, Jinhua, China
Membrane technologies, water treatment, antifouling modification, membrane fouling mechanism, environmental remediation

**Reyes Sierra-Alvarez**, The University of Arizona, Tucson, Arizona, United States of America
Bioremediation, water and wastewater treatment, microbial toxicity, PFAS, emerging contaminants, engineered nanomaterials

**Shane Snyder**, The University of Arizona, Tucson, Arizona, United States of America
Drinking water, hydraulic fracturing, produced water, water treatment processes (particularly advanced oxidation), use of cellular bioassays for characterizing complex mixtures of contaminants

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Ecotoxicology, Reproductive Biology, Zebrafish

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Wastewater treatment and valorization, Sludge management, Emerging contaminants, Aquatic pollution, Biodegradation

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Air pollution, dioxins

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Environmental analytical chemistry, Emerging contaminants, Transformation of emerging contaminants, High-resolution mass spectrometry for targeted and non-target analyses, Occurrence and fate of emerging contaminants

**Dan Tsang**, The Hong Kong University of Science and Technology, Hong Kong, Hong Kong

**Sunita Varjani**, City University of Hong Kong, Hong Kong, Hong Kong
Bioremediation, Biodegradation of hydrocarbons, Biosorption of heavy metals, Treatment of industrial effluents, Solid waste management

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Developmental toxicology, Exposure science, Risk assessment, Molecular toxicology

**Hongtao Wang**, Tongji University, Shanghai, China
Sludge conditioning, Advanced oxidation processes, Removal of heavy metals from aqueous phase

**Qilin Wang**, University of Technology Sydney, Faculty of Engineering and Information Technology, Broadway, Australia
Anaerobic digestion technologies, Wastewater treatment technologies, Sludge and waste treatment technologies, Biological nutrient removal, Aerobic digestion, Microplastics, Antimicrobial resistance, Greenhouse gas, Algae, Biochar, Fermentation, Bioenergy

**Zhi Wang**, Chinese Academy of Sciences Institute of Geodesy and Geophysics, Wuhan, China
Ecotoxicology, Toxic algae bloom and microcystins, Antibiotics and antibiotic resistance genes, Pollutant removal/phytoremediation, Emerging contaminants

**Zongsu Wei**, Aarhus University Centre for Water Technology, Aarhus, Denmark
Advanced oxidation, photocatalysis, emerging contaminants, aquatic chemistry, water and wastewater treatments,

**Ping Xiang**, Southwest Forestry University, Kunming, China
Indoor pollution and human health, Mechanistic toxicology, Novel flame retardants, Bioavailability and intestinal cell absorption, Soil pollution and food safety

**Lingtian Xie**, South China Normal University, School of Environment, Environmental Research Institute, Guangzhou, China
The impacts of temperature and pollutants on the functional integrity of the aquatic ecosystems, Trophic transfer of pollutants in aquatic ecosystems, The effects of emerging contaminants in aquatic organisms, Endocrine disruption chemicals, The evolution of resistance to contaminants

**Zeyu Yang**, Environment Canada Emergencies Science and Technology Division, Ottawa, Canada
Organic contaminants; Oil fingerprinting; Fate and behavior of oil and organic contaminants; Analytical method development; Bioavailability assessment of organic contaminants; Passive sampling technologies; Polycyclic aromatic hydrocarbons; Petroleum biomarkers; Naphthenic acids Chromatography
Xin Yu, Xiamen University, Xiamen, China
Drinking water, health-related water microbiology, water and wastewater treatment, bloom algae

Hongliang Zhang, Fudan University, Shanghai, China
Air Pollution, Source Apportionment, Numerical Modeling, Climate Change, Landuse Changes

Minghui Zheng, Research Centre for Eco-Environmental Sciences Chinese Academy of Sciences, Beijing, China
Persistent Organic Pollutants, Dioxins, Incineration, POPs Emission, POPs Monitoring

Bingsheng Zhou, Institute of Hydrobiology Chinese Academy of Sciences, Wuhan, China
Fish toxicology; in vitro assay; environmental risk assessment; emerging environmental pollutants; nanoparticles and toxicology
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INTRODUCTION
Submission of Papers
All manuscripts should be submitted electronically through Editorial Manager which can be accessed at https://www.editorialmanager.com/CHemosphere/default.aspx.

During submission papers should be marked for the attention of a subject Editor or the relevant section, if possible. Failure to provide this information will significantly delay processing of the manuscript.

Types of article

Chemosphere accepts the following article types. Please note that papers with a routine nature and lacking originality, novelty and uniqueness will not be accepted for publication.

Research papers that meet the Aims and Scope of the journal reporting original and previously unpublished work. The Editors generally encourage brevity for all Research Papers should preferably not exceed 6,500 words (excluding refs.)

Review articles should preferably be 10,000 words or less (excluding refs.)

Short communications must not exceed 2,000 words and will be given priority for rapid publication. A Short Communication should be of significant scientific merit (a novel finding that warrants immediate publication).

Letter to the Editor are a written discussion of papers published in the journal. Letters are accepted on the basis of new scientific insights on the particular topic, critical additional information, relevance to the published paper and timeliness. Authors will be invited to submit a Reply to respond to points raised. The Editor will decide on the publication of Letters and Replies based on scientific merit, importance to the raised issues, and interest to the general audience. Letters and Replies of an unprofessional or unscientific nature, or containing personal invective, will not be considered.

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You can use this list to carry out a final check of your submission before you send it to the journal for review. Please check the relevant section in this Guide for Authors for more details.

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*Supplemental files* (where applicable)

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- Permission has been obtained for use of copyrighted material from other sources (including the Internet)
- A competing interests statement is provided, even if the authors have no competing interests to declare
- Journal policies detailed in this guide have been reviewed
- Referee suggestions and contact details provided, based on journal requirements

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Please see our information on Ethics in publishing.

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If the work involves the use of human subjects, the author should ensure that the work described has been carried out in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki) for experiments involving humans. The manuscript should be in line with the Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals and aim for the inclusion of representative human populations (sex, age and ethnicity) as per those recommendations. The terms sex and gender should be used correctly.

Authors should include a statement in the manuscript that informed consent was obtained for experimentation with human subjects. The privacy rights of human subjects must always be observed.

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