ECOTOXICOLOGY AND ENVIRONMENTAL SAFETY

TABLE OF CONTENTS

- Description p.1
- Abstracting and Indexing p.2
- Editorial Board p.2
- Guide for Authors p.6

DESCRIPTION

Announcement: From January 2021 Ecotoxicology and Environmental Safety will become an open access journal. Authors who publish in Ecotoxicology and Environmental Safety will be able to make their work immediately, permanently, and freely accessible.

Ecotoxicology and Environmental Safety continues with the same aims and scope, editorial team, submission system and rigorous peer review.

Ecotoxicology and Environmental Safety authors will pay an article publishing charge (APC), have a choice of license options, and retain copyright to their published work. The APC will be requested after peer review and acceptance. The APC payment will be required for all accepted articles submitted after the 30th of September 2020. The APC for Ecotoxicology and Environmental Safety will be USD 2600 (excluding taxes).

Please note: Authors who have submitted their paper on or before the 30th of September 2020, will have their accepted article published in Ecotoxicology and Environmental Safety at no charge. Authors submitting their paper after this date will be requested to pay the APC. For more details visit our FAQs page.

Ecotoxicology and Environmental Safety is a multi-disciplinary journal that focuses on understanding the exposure and effects of environmental contamination on organisms including human health. The scope of the journal covers three main themes. The topics within these themes are indicated below (but are not limited to) the following:

Ecotoxicology Aquatic and terrestrial ecotoxicology of organisms including microbes, invertebrates, vertebrate animals and plants. Also, mesocosm or field studies informing on fate and effects. Mechanistic studies relating exposure, bioavailability and effects. Molecular to whole organism studies, including animal behaviour and population effects. Methods in ecotoxicology that address modes of action including omics, systems biology, quantitative measurements in living cells/tissues, biomarkers, histopathology, ecophysiology.

Environmental Chemistry Soil, sediment and water chemistry that explains the fate, behaviour, sinks and effects of toxic substances such as metals, industrial and agrochemicals, nanomaterials, plastics and emerging contaminants. Mechanistic studies that identify source apportionment, spatial or temporal distribution of toxic substances, chemical speciation, persistence and transformations in the environment. Mixtures effects and interaction with environmental factors such as pH, organic matter, temperature and salinity. Mechanistic
studies on remediation of wastewater and sludge, on biosorbants, biochars, green chemistry, chemical sensors and biosensor technology. **Environmental Safety** Epidemiological studies linking environmental contamination to human health effects. Molecular mechanism-based environmental toxicological studies using cell or animal models to evaluate hazards of air pollution, groundwater and drinking water contaminations, and environmental health and safety impacts from persistent toxic substances in the environment and food chain. Mechanistic elucidation of detrimental effects upon exposure to various contaminants at cellular and molecular levels and novel method development for ecotoxicological and environmental toxicological research. Evaluation of exposure, toxicity, and environmental risk using computational methods, such as big data, machine learning, and quantitative structure toxicity relationship modeling.

The journal publishes hypothesis- or observation-driven research, with emphasis on mechanistic understanding and/or reporting new phenomena. Therefore, the following types of routine reports are out of scope of the journal and should not be submitted:•Routine monitoring-style reports of pollutant concentration in the environment or biota.•Routine measurements of biomolecules in an organism without mechanistic studies or an experimental context.•Routine reports of adsorption isotherms, catalytic reactions, remediation method, and other very well-known phenomena of chemicals or materials•Studies on general environmental parameters that affect the physiology of organisms, such as salt or draught effects on plants without an environmental pollution aspect to study design. •Agronomy studies, natural geochemistry studies, and animal biology studies that do not have an environmental contamination aspect to the research

**ABSTRACTING AND INDEXING**

PubMed/Medline
SIIC Data Bases
Directory of Open Access Journals (DOAJ)

**EDITORIAL BOARD**

**Co-Editors-in-Chief**
Richard Handy, University of Plymouth, Plymouth, United Kingdom
Toxicity test methods with nanomaterials; Dietary uptake studies (in vivo, gut perfusions, cell lines); Clinical safety (dentistry, injectable nanomaterials, nanomedicines); Environmental effects, especially on aquatic species
Bing Yan, Guangzhou University, Guangzhou, China
nanoparticle functionalization, nanotoxicity, cytotoxicity, chemistry, characterization, animal model, molecular interaction, cell signaling, systems toxicology, structural activity relationship

**Associate Editors**
Mohamed Abdel-Daim, Suez Canal University, El Ismailia, Egypt
Pharmacology, Toxicology, Alternative Medicine, Drug Toxicology, Alternative Medicine, Food Supplements
Fernando Barbosa Jr, University of Sao Paulo, SAO PAULO, Brazil
Toxicology of metals, metalloids and emerging contaminants; Human Biomonitoring and Exposomics; Speciation analysis of trace elements; Biomarkers; Omics in mechanistic and predictive toxicology; Data mining in toxicology; Nanotoxicology and nanosafety; Remediation; Air, water and soil pollution
Renjie Chen, Fudan University School of Public Health, Shanghai, China
Environmental epidemiology, especially on the health effects of air pollution, temperature and climate change
Caterina Faggio, University of Messina, Messina, Italy
Environmental contaminants and food additives; cell volume regulation and cytotoxicity in shellfish and fish; mechanisms responsible of the eryptosis; haematological and serological parameters in teleosts; oxidative stress markers and health status in non-target aquatic organisms., Environmental contaminants and food additives; cell volume regulation and cytotoxicity in shellfish and fish; mechanisms responsible of the eryptosis; haematological and serological parameters in teleosts; oxidative stress markers and health status in non-target aquatic organisms, Environmental contaminants and food additives, cell volume regulation and cytotoxicity in shellfish and fish, oxidative stress markers and health status in non-target aquatic organisms, mechanisms responsible of the eryptosis, haematological and serological parameters in teleosts
Environmental chemistry, nanotoxicology, big data, machine learning, biodiversity
Saddam Hussain, University of Agriculture Faisalabad, Faisalābād, Pakistan
Plant Stress Physiology, Plant Mineral Nutrition, Plant-Soil-Environment-Interactions, Climate resilience
Taisen Iguchi, National Institute for Basic Biology, Okazaki, Japan
Kishore Krishnan
Kelvin Sze-Yin Leung, Hong Kong Baptist University, Department of Chemistry, Hong Kong, Hong Kong
Environmental analytical chemistry, Emerging contaminants, their transformation and fate, High-resolution mass spectrometry for target and non-target analyses, Human exposure, Exposure assessment
Yi-Fan Li, Harbin Institute of Technology, Haerbin, China
Daohui Lin, Zhejiang University Library, Hangzhou, China
Nanomaterials; Ecotoxicity; Nanotoxicity; Bioavailability; Colloidal behavior; Sorption
Megharaj Mallavarapu, The University of Newcastle, Callaghan, New South Wales, Australia
Bioremediation; Ecotoxicology; Pollutant-microbe interactions
Haruhiko Nakata, Kumamoto University, Kumamoto, Japan
Jae-Sung Rhee, Incheon National University, Incheon, South Korea
Ecotoxicogenomics; Aquatic Toxicology; Ecotoxicology; Molecular Toxicology; Aquatic Animal; Fish; Marine Invertebrate
Arsalan Sepehri, The University of Toledo College of Engineering, Toledo, Ohio, United States of America
Biological Wastewater Treatment, Nutrient Removal, Desalination, Membrane Module Design, Gas Separation Membrane, Activated Sludge Process, Ecotoxicology, Transboundary Waters, UN Sustainable Development Goals, Water Diplomacy, Green Chemistry
Jianbo Shi, Chinese Academy of Sciences, Beijing, China
Environmental Behavior of pollutants and impacts
Maoyong Song, Chinese Academy of Sciences, Beijing, China
Biomarkers in ecotoxicity research
Raewyn Town, University of Antwerp, Department of Biology, Wilrijk, Belgium
Environmental physical chemistry; Electrochemistry, Dynamic chemical speciation; Nanoparticle reactivity; Bioavailability
Munish Kumar Upadhyay, Indian Institute of Technology Kanpur, Department of Civil Engineering, Kanpur, India
Arsenic, Rice, Metal toxicity, Soil chemistry, Agriculture, Heavy metals/ Metalloduction, Ecotoxicology, Antioxidant defence system, Biochemistry, Risk assessment, Dietary contaminants exposure, Pollution, Biomonitoring, Remediation, Oxidative stress, Chromium, Wastewater
Muhammad Usman, University of Agriculture Faisalabad, Faisalābād, Pakistan
Biochar, Hybrid nanoparticles, Nanoparticles, Cadmium, Microplastics, Salinity, Phytoremediation, DGT, antioxidants, Enzymes, Health risk assessment, Chemical immobilization, SEM, XRD, FTIR
Lei Wang, Nankai University College of Environmental Science and Engineering, Tianjin, China
Transport and transformation behavior of organic contaminants in soil and aquatic environments, Human biomonitoring and toxicokinetics of emerging contaminants, Analysis technology of Environmental samples (water, soil, sediment, and biota), Water treatment technology
Po Keung Wong, The Chinese University of Hong Kong School of Life Sciences, Hong Kong, Hong Kong
Environmental Toxicology and Environmental Microbiology, Microbiology, Photocatalysis, Biohybrid for energy and chemicals production
Jingchuan Xue, Guangdong University of Technology Institute of Environmental and Ecological Engineering, Guangzhou, China
Analytical Chemistry, Environmental Chemistry, Gut Microbiome Toxicity, Metabolomics, Exposomics, Lipidomics
Yuyi Yang, Chinese Academy of Sciences Wuhan Botanical Garden, Wuhan, China
Antibiotic resistance genes, Aquatic microbial ecology, Micro- and nanoplastics, Microplastic Biofilm, Effect of pollutants on bacterial communities, Environmental microorganism, Bioremediation, Environmental chemistry, Microbial biotechnology, Bacterial Community
Tao Zhang, Sun Yat-Sen University, Guangzhou, China
Emerging pollutants, Human exposure, Risk assessment, Poly- and perfluoralkyl substances, Neonicotinoid insecticides
Shulin Zhuang, Zhejiang University, Hangzhou, China
Computational Toxicology, Molecular Modelling, Human Health, Metabolism, Emerging Contaminants, Machine learning, Computational toxicology, Molecular Modeling, Molecular interactions, Environmental toxicology
Expanded Editorial Board

**Gabriela Aguirre-Martínez**, Arturo Prat University of, Faculty of Health Sciences, Iquique, Chile
Ecotoxicology, Aquatic pollution, Aquatic Toxicology, Biomarkers, Exposure and risk assessment of chemicals, Acute and chronic toxicity tests, Emerging contaminants, Persistent Organic Pollutants, Field bioassays, Oxidative stress

**Maria Laura Ballesteros**, Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Buenos Aires Argentina
FISH; INVERTEBRATES; BIOMARKERS; AQUATIC TOXICOLOGY; BIOTRANSFORMATION; OXIDATIVE STRESS; HISTOPATHOLOGY; SWIMMING BEHAVIOUR; ENVIRONMENTAL TOXICOLOGY; ORGANIC COMPOUNDS

**Aicha Belkadhi**, University of Tunis El Manar, Tunis, Tunisia
Metal toxicity; Signaling molecules; Growth regulators; Environmental remediation; Plant defense system; Abiotic stresses; Stress biomarkers; Efficiency of phytoremediation; Mechanisms of tolerance to heavy metals; Role of elicitor molecules

**Tiziana Cappello**, University of Messina, Department of Biological and Environmental Sciences, Messina, Italy
Environmental metabolomics; Aquatic ecotoxicology; Biomonitoring and remediation strategies; Environmental risk assessment; Metals; Emerging pollutants (i.e. microplastics, nanoparticles); Marine invertebrates; Fish; Metabolic pathways; Biomarkers in ecotoxicity

**Carlos L. Céspedes-Acuña**, University of Bio-Bio - Chillan Campus, Chillan, Chile
Insecticides, herbicides, antioxidants, Insect Growth Regulation, Plant Growth Regulation, enzymes, neurotoxins, secondary metabolites, antifungal, antibacterial, NUTRACEUTICALS

**Nathaniel Clark**, University of Plymouth, Plymouth, United Kingdom
Fish toxicology, Ecotoxicology, Metals, Nanomaterials, Plastics, Gastrointestinal uptake

**Jie Han**, Xi'an Jiaotong University School of Human Settlements and Civil Engineering, Xian, China
Emerging contaminants, Microplastics and nanoplastics, Zoonotic pathogens, Carbon neutrality, Data science for environmental and public health

**Liping Hou**, Guangzhou University, Guangzhou, China
Environmental toxicology, engineered nanoparticles, heavy metals, animal models, cytotoxicity, overweight and obesity, environmental toxicology, micropollutants

**Hassan Karimi-Maleh**, University of Electronic Science and Technology of China, Chengdu, Sichuan, China
Water treatment, Electrochemical systems, Energy storage, Food quality, Carbon-based nanomaterials and Sensor

**Jin-Long Li**, Northeast Agricultural University, Haerbin, China
Heavy Metal (Cadmium), Selenium, Food matrix hemoprevention (Lycopene), Pesticides (Atrazine), PAEs (DEHP)

**Mariana Molnárová**, Comenius University in Bratislava, Bratislava, Slovakia
toxic heavy metals, phytotoxicity, oxidative stress, bioaccumulation, reciprocal interactions of metals, photosynthetic pigments, thiols groups, water content, translocation index, plants

**Kavitha Pathakoti**, Jackson State University, Department of Biology, Jackson, Mississippi, United States of America
Environmental toxicology; ecotoxicology; nanotoxicology; oxidative stress; biomarkers; biomonitoring; environmental risk; pesticides; environmental pollutants; photocatalytic activity.

**Yuvaraja Teekaraman**, Gwangju Institute of Science and Technology Center for Integrated Access Systems, Gwangju, South Korea
Environmental Safety; Environmental Regulation; Clean Energy & Sustainable Engineering; Energy Efficiency; Energy Economics & Policy; Marine Environment; Environmental Process Modelling; Environmental Risk Assessment; Climate Change; Underwater Communication

**Tongtao Yue**, Ocean University of China College of Environmental Science and Engineering, Qingdao, China
Molecular modeling, Environmental fate, Nano-bio interactions, nanoparticle inhalation, cytotoxicity, cell membrane remodeling, cell signaling, protein structures, drug delivery
GUIDE FOR AUTHORS

Your Paper Your Way

We now differentiate between the requirements for new and revised submissions. You may choose to submit your manuscript as a single Word or PDF file to be used in the refereeing process. Only when your paper is at the revision stage, will you be requested to put your paper in to a 'correct format' for acceptance and provide the items required for the publication of your article.

To find out more, please visit the Preparation section below.

INTRODUCTION

Scope of the EES journal

Ecotoxicology and Environmental Safety is a multi-disciplinary journal that focuses on understanding the exposure and effects of environmental contamination on organisms including human health. The scope of the journal covers (but are not limited to) three main themes. The topics within these themes are indicated below:

Ecotoxicology Aquatic and terrestrial ecotoxicology of organisms including microbes, invertebrates, vertebrate animals and plants. Also, mesocosms or field studies informing on fate and effects. Effects of emerging pollutants on plants or animals. Rhizospheric chemistry (speciation, translocations, transformation, absorption etc.) of trace pollutants in the plants. Techniques for producing safe food from contaminated soils and waters. Mechanistic studies relating exposure, bioavailability and effects. Molecular to whole organism studies, including animal behaviour and population effects. Methods in ecotoxicology that address modes of action including omics, systems biology, quantitative measurements in living cells/tissues, biomarkers, histopathology, ecophysiology.

Environmental Chemistry

Soil, sediment and water chemistry that explains the fate, behaviour, sinks and effects of toxic substances such as metals, industrial and agrochemicals, nanomaterials, plastics and emerging contaminants. Mechanistic studies that identify source apportionment, spatial or temporal distribution of toxic substances, chemical speciation, persistence and transformations in the environment. Mixtures effects and interaction with environmental factors such as pH, organic matter, temperature and salinity. Mechanistic studies on remediation of wastewater and sludge, on biosorbants, biochars, green chemistry, chemical sensors and biosensor technology. Carbon and nitrogen sequestration to maintain greenhouse gases emissions to improve atmospheric quality.

Environmental Safety

Epidemiological studies linking environmental contamination to human health effects. Studies to understand the role of climate as a stress factor with pollution and its combined effect on environment or human health. Molecular mechanism-based environmental toxicological studies using cell or animal models to evaluate hazards of air pollution, groundwater and drinking water contaminations, and environmental health and safety impacts from persistent toxic substances in the environment and food chain. Mechanistic elucidation of detrimental effects upon exposure to various contaminants at cellular and molecular levels and novel method development for ecotoxicological and environmental toxicological research. Evaluation of exposure, toxicity, and environmental risk using computational methods, such as big data, artificial intelligence, machine learning, and quantitative structure toxicity relationship modeling.

Types of paper

The journal publishes regular research articles. Regular research articles must not exceed 8,000 words. Word limit here is for text only. In principle the number of tables and figures should not collectively exceed seven. Any exceptions should require approval from editors. Review articles are welcome, but uninvited review article submissions will be critically assessed by editors. Correspondence articles must be a specific concise point on a very hot topic or controversial issue, and are not intended for short communication of partial studies, or preliminary work. They should not exceed 2000 words with maximum one figure or table and less than 10 references.
Authors may provide supporting information (for manuscripts exceeding the recommended length), and this material will be made available online.

The journal publishes hypothesis- or observation-driven research, with emphasis on mechanistic understanding and/or reporting new phenomena. Therefore, the following types of routine reports are out of scope of the journal and should NOT be submitted: Routine monitoring-style reports of pollutant concentration in the environment or biota with a narrow spectrum or local/ regional focus. Routine measurements of biomolecules in an organism without mechanistic studies or an experimental context. Routine reports of adsorption isotherms, catalytic reactions, remediation method, and other very well-known phenomena of chemicals or materials. Studies on general environmental parameters that affect the physiology of organisms, such as salt or draught effects on plants without an environmental pollution aspect to study design. Agronomy studies, natural geochemistry studies, and animal biology studies that do not have an environmental contamination aspect to the research. Research addressing simple plant physiological and growth parameters, or on overlapping topics or the extensions of already published articles. Manuscripts related to simple correlations between pollutants and health problems.

**Submission checklist**

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.

**Ensure that the following items are present:**

One author has been designated as the corresponding author with contact details:
- E-mail address
- Full postal address

All necessary files have been uploaded:

**Manuscript:**
- Include keywords
- All figures (include relevant captions)
- All tables (including titles, description, footnotes)
- Ensure all figure and table citations in the text match the files provided
- Indicate clearly if color should be used for any figures in print

**Graphical Abstracts / Highlights files** (where applicable)

**Supplemental files** (where applicable)

Further considerations
- Manuscript has been 'spell checked' and 'grammar checked'
- All references mentioned in the Reference List are cited in the text, and vice versa
- 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

For further information, visit our [Support Center](https://www.elsevier.com/supportcenter).

**BEFORE YOU BEGIN**

**Ethics in publishing**

Ethical statement concerning human and animal subjects is mandatory. For information on Ethics in publishing and Ethical guidelines for journal publication see [https://www.elsevier.com/publishingethics](https://www.elsevier.com/publishingethics) and [https://www.elsevier.com/ethicalguidelines](https://www.elsevier.com/ethicalguidelines).

**Declaration of competing interest**

Corresponding authors, on behalf of all the authors of a submission, must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential conflicts of interest include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. All authors, including those without competing interests to declare, should provide...
the relevant information to the corresponding author (which, where relevant, may specify they have nothing to declare). Corresponding authors should then use this tool to create a shared statement and upload to the submission system at the Attach Files step. Please do not convert the.docx template to another file type. Author signatures are not required.

**Declaration of generative AI in scientific writing**

The below guidance only refers to the writing process, and not to the use of AI tools to analyse and draw insights from data as part of the research process.

Where authors use generative artificial intelligence (AI) and AI-assisted technologies in the writing process, authors should only use these technologies to improve readability and language. Applying the technology should be done with human oversight and control, and authors should carefully review and edit the result, as AI can generate authoritative-sounding output that can be incorrect, incomplete or biased. AI and AI-assisted technologies should not be listed as an author or co-author, or be cited as an author. Authorship implies responsibilities and tasks that can only be attributed to and performed by humans, as outlined in Elsevier’s AI policy for authors.

Authors should disclose in their manuscript the use of AI and AI-assisted technologies in the writing process by following the instructions below. A statement will appear in the published work. Please note that authors are ultimately responsible and accountable for the contents of the work.

**Disclosure instructions**

Authors must disclose the use of generative AI and AI-assisted technologies in the writing process by adding a statement at the end of their manuscript in the core manuscript file, before the References list. The statement should be placed in a new section entitled 'Declaration of Generative AI and AI-assisted technologies in the writing process'.

*Statement: During the preparation of this work the author(s) used [NAME TOOL / SERVICE] in order to [REASON]. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.*

This declaration does not apply to the use of basic tools for checking grammar, spelling, references etc. If there is nothing to disclose, there is no need to add a statement.

**Submission declaration and verification**

Submission of an article implies that the work described has not been published previously (except in the form of an abstract, a published lecture or academic thesis, see ‘Multiple, redundant or concurrent publication’ for more information), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. To verify compliance, your article may be checked by Crossref Similarity Check and other originality or duplicate checking software.

**Preprints**

Please note that preprints can be shared anywhere at any time, in line with Elsevier's sharing policy. Sharing your preprints e.g. on a preprint server will not count as prior publication (see 'Multiple, redundant or concurrent publication' for more information).

**Use of inclusive language**

Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Content should make no assumptions about the beliefs or commitments of any reader; contain nothing which might imply that one individual is superior to another on the grounds of age, gender, race, ethnicity, culture, sexual orientation, disability or health condition; and use inclusive language throughout. Authors should ensure that writing is free from bias, stereotypes, slang, reference to dominant culture and/or cultural assumptions. We advise to seek gender neutrality by using plural nouns ("clinicians, patients/clients") as default/wherever possible to avoid using "he, she," or "he/she." We recommend avoiding the use of descriptors that refer to personal attributes such as age, gender, race, ethnicity, culture, sexual orientation, disability or health condition unless they are relevant and valid. When coding terminology is used, we recommend to avoid offensive or exclusionary terms such as "master", "slave", "blacklist" and "whitelist". We
suggest using alternatives that are more appropriate and (self-) explanatory such as "primary", "secondary", "blocklist" and "allowlist". These guidelines are meant as a point of reference to help identify appropriate language but are by no means exhaustive or definitive.

**Reporting sex- and gender-based analyses**

**Reporting guidance**
For research involving or pertaining to humans, animals or eukaryotic cells, investigators should integrate sex and gender-based analyses (SGBA) into their research design according to funder/sponsor requirements and best practices within a field. Authors should address the sex and/or gender dimensions of their research in their article. In cases where they cannot, they should discuss this as a limitation to their research's generalizability. Importantly, authors should explicitly state what definitions of sex and/or gender they are applying to enhance the precision, rigor and reproducibility of their research and to avoid ambiguity or conflation of terms and the constructs to which they refer (see Definitions section below). Authors can refer to the Sex and Gender Equity in Research (SAGER) guidelines and the SAGER guidelines checklist. These offer systematic approaches to the use and editorial review of sex and gender information in study design, data analysis, outcome reporting and research interpretation - however, please note there is no single, universally agreed-upon set of guidelines for defining sex and gender.

**Definitions**
Sex generally refers to a set of biological attributes that are associated with physical and physiological features (e.g., chromosomal genotype, hormonal levels, internal and external anatomy). A binary sex categorization (male/female) is usually designated at birth ("sex assigned at birth"), most often based solely on the visible external anatomy of a newborn. Gender generally refers to socially constructed roles, behaviors, and identities of women, men and gender-diverse people that occur in a historical and cultural context and may vary across societies and over time. Gender influences how people view themselves and each other, how they behave and interact and how power is distributed in society. Sex and gender are often incorrectly portrayed as binary (female/male or woman/man) and unchanging whereas these constructs actually exist along a spectrum and include additional sex categorizations and gender identities such as people who are intersex/have differences of sex development (DSD) or identify as non-binary. Moreover, the terms "sex" and "gender" can be ambiguous—thus it is important for authors to define the manner in which they are used. In addition to this definition guidance and the SAGER guidelines, the resources on this page offer further insight around sex and gender in research studies.

**Author contributions**
For transparency, we require corresponding authors to provide co-author contributions to the manuscript using the relevant CRediT roles. The CRediT taxonomy includes 14 different roles describing each contributor’s specific contribution to the scholarly output. The roles are: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Roles/Writing - original draft; and Writing - review & editing. Note that not all roles may apply to every manuscript, and authors may have contributed through multiple roles. More details and an example.

**Changes to authorship**
Authors are expected to consider carefully the list and order of authors before submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only before the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the corresponding author: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed.

Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors after the manuscript has been accepted. While the Editor considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.

**Article transfer service**
This journal uses the Elsevier Article Transfer Service to find the best home for your manuscript. This means that if an editor feels your manuscript is more suitable for an alternative journal, you might be asked to consider transferring the manuscript to such a journal. The recommendation might be
provided by a Journal Editor, a dedicated Scientific Managing Editor, a tool assisted recommendation, or a combination. If you agree, your manuscript will be transferred, though you will have the opportunity to make changes to the manuscript before the submission is complete. Please note that your manuscript will be independently reviewed by the new journal. More information.

Copyright
Upon acceptance of an article, authors will be asked to complete an 'Exclusive License Agreement' (more information). Permitted third party reuse of gold open access articles is determined by the author's choice of user license.

Author rights
As an author you (or your employer or institution) have certain rights to reuse your work. More information.

Elsevier supports responsible sharing
Find out how you can share your research published in Elsevier journals.

Role of the funding source
You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. If the funding source(s) had no such involvement, it is recommended to state this.

Open access
Please visit our Open Access page for more information.

Elsevier Researcher Academy
Researcher Academy is a free e-learning platform designed to support early and mid-career researchers throughout their research journey. The "Learn" environment at Researcher Academy offers several interactive modules, webinars, downloadable guides and resources to guide you through the process of writing for research and going through peer review. Feel free to use these free resources to improve your submission and navigate the publication process with ease.

Language and language services
Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who require information about language editing and copyediting services pre-and post-submission please visit https://webshop.elsevier.com/language-editing/ or our customer support site at https://service.elsevier.com for more information. The values reported on research papers should be limited to 3 significant figures, unless required otherwise. Ppm or ppb are not accepted and this should be presented as mg/kg or g/kg. Centrifugation speed should be presented in x g, not rpm.

Submission
Our online submission system guides you stepwise through the process of entering your article details and uploading your files. The system converts your article files to a single PDF file used in the peer-review process. Editable files (e.g., Word, LaTeX) are required to typeset your article for final publication. All correspondence, including notification of the Editor's decision and requests for revision, is sent by e-mail.

Submit your article
If you have difficulty with your submission or any other questions, please contact the Editorial Office:

Ecotoxicology and Environmental Safety
Editorial Office
525 B Street, Suite 1800
San Diego, CA 92101-4495, USA
Telephone: (619) 699-6297
Fax: (619) 699-6850
E-mail: ees2@elsevier.com
**Referees**
All submitted manuscripts must include a list of five suggested reviewers. Please include the names and contact information (including email addresses) for 5 reviewer suggestions. Typically three of these should be from countries other than those of the authors. Please note that this is a mandatory element of your submission and the Editorial Office cannot locate reviewers on your behalf. If you are unable to suggest potential experts in the field, please refer to your references for possible reviewers.

**Additional information**
Each manuscript should be accompanied by a letter outlining the basic findings of the paper and their significance.

**PREPARATION**

**Queries**
For questions about the editorial process (including the status of manuscripts under review) or for technical support on submissions, please visit our Support Center.

**NEW SUBMISSIONS**
Submission to this journal proceeds totally online and you will be guided stepwise through the creation and uploading of your files. The system automatically converts your files to a single PDF file, which is used in the peer-review process.

As part of the Your Paper Your Way service, you may choose to submit your manuscript as a single file to be used in the refereeing process. This can be a PDF file or a Word document, in any format or layout that can be used by referees to evaluate your manuscript. It should contain high enough quality figures for refereeing. If you prefer to do so, you may still provide all or some of the source files at the initial submission. Please note that individual figure files larger than 10 MB must be uploaded separately.

**Reference formatting**
There are no strict requirements on reference formatting at submission. References can be in any style or format as long as the style is consistent. Where applicable, author(s) name(s), journal title/book title, chapter title/article title, year of publication, volume number/book chapter and the pagination must be present. Use of DOI is highly encouraged. The reference style used by the journal will be applied to the accepted article by Elsevier at the proof stage. Note that missing data will be highlighted at proof stage for the author to correct. If you do wish to format the references yourself they should be arranged according to the following examples:


**Formatting requirements**
There are no strict formatting requirements but all manuscripts must contain the essential elements needed to convey your manuscript, for example Abstract, Keywords, Introduction, Materials and Methods, Results, Conclusions, Artwork and Tables with Captions.

If your article includes any Videos and/or other Supplementary material, this should be included in your initial submission for peer review purposes.

Divide the article into clearly defined sections.

Please ensure your paper has consecutive line numbering - this is an essential peer review requirement.

**Figures and tables embedded in text**
Please ensure the figures and the tables included in the single file are placed next to the relevant text in the manuscript, rather than at the bottom or the top of the file. The corresponding caption should be placed directly below the figure or table.

**Peer review**
This journal operates a single anonymized review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor's decision is final. Editors are not involved in decisions about papers which they have written themselves or have been written by family members or colleagues or which relate to products or services in which the editor has an
interest. Any such submission is subject to all of the journal's usual procedures, with peer review handled independently of the relevant editor and their research groups. More information on types of peer review.

**REVISED SUBMISSIONS**

Use double spacing. All pages must be numbered, beginning with the abstract. All lines must be numbered, preferably continuously throughout the entire manuscript. When submitting the revised manuscript, please make sure that you upload the final version of the paper. Please remove the old version(s) of the manuscript before submitting the revised version.

Use of word processing software

Regardless of the file format of the original submission, at revision you must provide us with an editable file of the entire article. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the Guide to Publishing with Elsevier). See also the section on Electronic artwork.

To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

**Article structure**

**Subdivision - numbered sections**

Divide your article into clearly defined and numbered sections. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. (the abstract is not included in section numbering). Use this numbering also for internal cross-referencing: do not just refer to 'the text'. Any subsection may be given a brief heading. Each heading should appear on its own separate line.

**Introduction**

State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

**Material and methods**

Materials and methods should be sufficiently detailed to enable the experiments to be reproduced. It is mandatory to give formal assurance that any study involving humans or experimental animals were conducted in accordance with national and institutional guidelines for the protection of human subjects and animal welfare. No manuscript will be considered unless this information is supplied.

**Theory/calculation**

A Theory section should extend, not repeat, the background to the article already dealt with in the Introduction and lay the foundation for further work. In contrast, a Calculation section represents a practical development from a theoretical basis.

**Results/Discussion**

Results should be clear and concise. Discussion should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

**Conclusions**

The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.

**Appendices**

If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

**Essential title page information**

- **Title.** Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.
- **Author names and affiliations.** Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. You can add your name between parentheses in your own script behind the English transliteration. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lowercase superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author.
• **Corresponding author.** Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. This responsibility includes answering any future queries about Methodology and Materials. **Ensure that the e-mail address is given and that contact details are kept up to date by the corresponding author.**

• **Present/permanent address.** If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

**Highlights**

Highlights are mandatory for this journal as they help increase the discoverability of your article via search engines. They consist of a short collection of bullet points that capture the novel results of your research as well as new methods that were used during the study (if any). Please have a look at the example Highlights.

Highlights should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point).

**Abstract**

A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

**Graphical abstract**

Although a graphical abstract is optional, its use is encouraged as it draws more attention to the online article. The graphical abstract should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership. Graphical abstracts should be submitted as a separate file in the online submission system. Image size: Please provide an image with a minimum of 531 × 1328 pixels (h × w) or proportionally more. The image should be readable at a size of 5 × 13 cm using a regular screen resolution of 96 dpi. Preferred file types: TIFF, EPS, PDF or MS Office files. You can view Example Graphical Abstracts on our information site.

**Keywords**

Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

**Abbreviations**

Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

**Acknowledgements**

Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

**Formatting of funding sources**

List funding sources in this standard way to facilitate compliance to funder's requirements:

Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, it is recommended to include the following sentence:
This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

**Units**
Follow internationally accepted rules and conventions: use the international system of units (SI). If other units are mentioned, please give their equivalent in SI. Specially please note, the values reported on research papers should be limited to 3 significant figures, unless required otherwise. ppm or ppb are not accepted and this should be presented as mg/kg or g/kg. Centrifugation speed should be presented in x g, not rpm.

**Math formulae**
Please submit math equations as editable text and not as images. Present simple formulae in line with normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text).

**Footnotes**
Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors build footnotes into the text, and this feature may be used. Should this not be the case, indicate the position of footnotes in the text and present the footnotes themselves separately at the end of the article.

**Artwork**
**Electronic artwork**
**General points**
- Make sure you use uniform lettering and sizing of your original artwork.
- Preferred fonts: Arial (or Helvetica), Times New Roman (or Times), Symbol, Courier.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Indicate per figure if it is a single, 1.5 or 2-column fitting image.
- For Word submissions only, you may still provide figures and their captions, and tables within a single file at the revision stage.
- Please note that individual figure files larger than 10 MB must be provided in separate source files.

A detailed guide on electronic artwork is available.

**You are urged to visit this site; some excerpts from the detailed information are given here.**

**Formats**
Regardless of the application used, when your electronic artwork is finalized, please 'save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):
- EPS (or PDF): Vector drawings. Embed the font or save the text as 'graphics'.
- TIFF (or JPEG): Color or grayscale photographs (halftones): always use a minimum of 300 dpi.
- TIFF (or JPEG): Bitmapped line drawings: use a minimum of 1000 dpi.
- TIFF (or JPEG): Combinations bitmapped line/half-tone (color or grayscale): a minimum of 500 dpi is required.

**Please do not:**
- Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); the resolution is too low.
- Supply files that are too low in resolution.
- Submit graphics that are disproportionately large for the content.

**Color artwork**
Please make sure that artwork files are in an acceptable format (TIFF (or JPEG), EPS (or PDF), or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then Elsevier will ensure, at no additional charge, that these figures will appear in color online (e.g., ScienceDirect and other sites) regardless of whether or not these illustrations are reproduced in color in the printed version. For color reproduction in print, you will receive information regarding the costs from Elsevier after receipt of your accepted article. Please indicate your preference for color: in print or online only. Further information on the preparation of electronic artwork.
**Figure captions**
Ensure that each illustration has a caption. A caption should comprise a brief title (not on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

**Text graphics**
Text graphics may be embedded in the text at the appropriate position. See further under Electronic artwork.

**References**

**Citation in text**
Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

All citations in the text should refer to:
- **Single author:** the author’s name (without initials, unless there is ambiguity) and the year of publication;
- **Two authors:** both authors' names and the year of publication;
- **Three or more authors:** first author's name followed by 'et al.' and the year of publication. Citations may be made directly (or parenthetically). Groups of references should be listed first alphabetically, then chronologically.

Examples: ‘as demonstrated (Allan, 2000a, 2000b, 1999; Allan and Jones, 1999). Kramer et al. (2010) have recently shown ....’

**Reference links**
Increased discoverability of research and high quality peer review are ensured by online links to the sources cited. In order to allow us to create links to abstracting and indexing services, such as Scopus, Crossref and PubMed, please ensure that data provided in the references are correct. Please note that incorrect surnames, journal/book titles, publication year and pagination may prevent link creation. When copying references, please be careful as they may already contain errors. Use of the DOI is highly encouraged.

A DOI is guaranteed never to change, so you can use it as a permanent link to any electronic article. An example of a citation using DOI for an article not yet in an issue is: VanDecar J.C., Russo R.M., James D.E., Ambeh W.B., Franke M. (2003). Aseismic continuation of the Lesser Antilles slab beneath northeastern Venezuela. Journal of Geophysical Research, https://doi.org/10.1029/2001JB000884. Please note the format of such citations should be in the same style as all other references in the paper.

**Web references**
As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

**Data references**
This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.

**Preprint references**
Where a preprint has subsequently become available as a peer-reviewed publication, the formal publication should be used as the reference. If there are preprints that are central to your work or that cover crucial developments in the topic, but are not yet formally published, these may be referenced. Preprints should be clearly marked as such, for example by including the word preprint, or the name of the preprint server, as part of the reference. The preprint DOI should also be provided.

**References in a special issue**
Please ensure that the words 'this issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.
**Reference management software**

Most Elsevier journals have their reference template available in many of the most popular reference management software products. These include all products that support Citation Style Language styles, such as Mendeley. Using citation plug-ins from these products, authors only need to select the appropriate journal template when preparing their article, after which citations and bibliographies will be automatically formatted in the journal's style. If no template is yet available for this journal, please follow the format of the sample references and citations as shown in this Guide. If you use reference management software, please ensure that you remove all field codes before submitting the electronic manuscript. More information on how to remove field codes from different reference management software.

**Reference formatting**

There are no strict requirements on reference formatting at submission. References can be in any style or format as long as the style is consistent. Where applicable, author(s) name(s), journal title/book title, chapter title/article title, year of publication, volume number/book chapter and the article number or pagination must be present. Use of DOI is highly encouraged. The reference style used by the journal will be applied to the accepted article by Elsevier at the proof stage. Note that missing data will be highlighted at proof stage for the author to correct. If you do wish to format the references yourself they should be arranged according to the following examples:

**Reference style**

References should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters 'a', 'b', 'c', etc., placed after the year of publication.

**Examples:**

Reference to a journal publication:

Reference to a book:

**Journal abbreviations source**

Journal names should be abbreviated according to the List of Title Word Abbreviations.

**Video**

Elsevier accepts video material and animation sequences to support and enhance your scientific research. Authors who have video or animation files that they wish to submit with their article are strongly encouraged to include links to these within the body of the article. This can be done in the same way as a figure or table by referring to the video or animation content and noting in the body text where it should be placed. All submitted files should be properly labeled so that they directly relate to the video file's content. In order to ensure that your video or animation material is directly usable, please provide the file in one of our recommended file formats with a preferred maximum size of 150 MB per file, 1 GB in total. Video and animation files supplied will be published online in the electronic version of your article in Elsevier Web products, including ScienceDirect. Please supply 'stills' with your files: you can choose any frame from the video or animation or make a separate image. These will be used instead of standard icons and will personalize the link to your video data. For more detailed instructions please visit our video instruction pages. Note: since video and animation cannot be embedded in the print version of the journal, please provide text for both the electronic and the print version for the portions of the article that refer to this content.

**Data visualization**

Include interactive data visualizations in your publication and let your readers interact and engage more closely with your research. Follow the instructions here to find out about available data visualization options and how to include them with your article.

**Supplementary material**

Supplementary material such as applications, images and sound clips, can be published with your article to enhance it. Submitted supplementary items are published exactly as they are received (Excel or PowerPoint files will appear as such online). Please submit your material together with the article and supply a concise, descriptive caption for each supplementary file. If you wish to make changes to
supplementary material during any stage of the process, please make sure to provide an updated file. Do not annotate any corrections on a previous version. Please switch off the 'Track Changes' option in Microsoft Office files as these will appear in the published version.

**Research data**
This journal requires and enables you to share data that supports your research publication where appropriate, and enables you to interlink the data with your published articles. Research data refers to the results of observations or experimentation that validate research findings, which may also include software, code, models, algorithms, protocols, methods and other useful materials related to the project.

Below are a number of ways in which you can associate data with your article or make a statement about the availability of your data when submitting your manuscript. When sharing data in one of these ways, you are expected to cite the data in your manuscript and reference list. Please refer to the "References" section for more information about data citation. For more information on depositing, sharing and using research data and other relevant research materials, visit the research data page.

**Data linking**
If you have made your research data available in a data repository, you can link your article directly to the dataset. Elsevier collaborates with a number of repositories to link articles on ScienceDirect with relevant repositories, giving readers access to underlying data that gives them a better understanding of the research described.

There are different ways to link your datasets to your article. When available, you can directly link your dataset to your article by providing the relevant information in the submission system. For more information, visit the database linking page.

For supported data repositories a repository banner will automatically appear next to your published article on ScienceDirect.

In addition, you can link to relevant data or entities through identifiers within the text of your manuscript, using the following format: Database: xxxx (e.g., TAIR: AT1G01020; CCDC: 734053; PDB: 1XFN).

**Research Elements**
This journal enables you to publish research objects related to your original research – such as data, methods, protocols, software and hardware – as an additional paper in a Research Elements journal.

Research Elements is a suite of peer-reviewed, open access journals which make your research objects findable, accessible and reusable. Articles place research objects into context by providing detailed descriptions of objects and their application, and linking to the associated original research articles. Research Elements articles can be prepared by you, or by one of your collaborators.

During submission, you will be alerted to the opportunity to prepare and submit a manuscript to one of the Research Elements journals.

More information can be found on the Research Elements page.

**Data statement**
To foster transparency, we require you to state the availability of your data in your submission if your data is unavailable to access or unsuitable to post. This may also be a requirement of your funding body or institution. You will have the opportunity to provide a data statement during the submission process. The statement will appear with your published article on ScienceDirect. For more information, visit the Data Statement page.

**AFTER ACCEPTANCE**

**Online proof correction**
To ensure a fast publication process of the article, we kindly ask authors to provide us with their proof corrections within two days. Corresponding authors will receive an e-mail with a link to our online proofing system, allowing annotation and correction of proofs online. The environment is similar to
MS Word: in addition to editing text, you can also comment on figures/tables and answer questions from the Copy Editor. Web-based proofing provides a faster and less error-prone process by allowing you to directly type your corrections, eliminating the potential introduction of errors. If preferred, you can still choose to annotate and upload your edits on the PDF version. All instructions for proofing will be given in the e-mail we send to authors, including alternative methods to the online version and PDF.

We will do everything possible to get your article published quickly and accurately. Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only be considered at this stage with permission from the Editor. It is important to ensure that all corrections are sent back to us in one communication. Please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility.

**Offprints**
The corresponding author will, at no cost, receive a customized [Share Link](https://www.elsevier.com) providing 50 days free access to the final published version of the article on [ScienceDirect](https://www.elsevier.com). The Share Link can be used for sharing the article via any communication channel, including email and social media. For an extra charge, paper offprints can be ordered via the offprint order form which is sent once the article is accepted for publication. Corresponding authors who have published their article gold open access do not receive a Share Link as their final published version of the article is available open access on ScienceDirect and can be shared through the article DOI link.

**AUTHOR INQUIRIES**
Visit the [Elsevier Support Center](https://www.elsevier.com) to find the answers you need. Here you will find everything from Frequently Asked Questions to ways to get in touch. You can also check the status of your submitted article or find out when your accepted article will be published.

© Copyright 2018 Elsevier | https://www.elsevier.com