



# SCIENCE OF THE TOTAL ENVIRONMENT

An International Journal for Scientific Research into the Environment and its Relationship with Humankind

## AUTHOR INFORMATION PACK

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### DESCRIPTION

*Science of the Total Environment* is an international journal for publication of original research on the **total environment**, which includes the **atmosphere, hydrosphere, biosphere, lithosphere, and anthroposphere**.

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The total environment is characterized where these five spheres overlap. Studies that focus on at least two or three of these will be given primary consideration. Papers reporting results from only one sphere will not be considered. Field studies are given priority over laboratory studies. The total environment is studied when data are collected and described from these five spheres. By definition total environment studies must be multidisciplinary.

Examples of data from the five spheres are given below:

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Subject areas may include, but are not limited to:

- Agriculture, forestry, land use and management
- Air pollution quality and human health
- Contaminant (bio)monitoring and assessment
- Ecosystem services and life cycle assessments
- Ecotoxicology and risk assessment
- Emerging fields including global change and contaminants
- Environmental management and policy
- Environmental remediation
- Environmental sources, processes and global cycling
- Groundwater hydrogeochemistry and modeling
- Human health risk assessment and management
- Nanomaterials in the environment
- Noise in the environment
- Persistent organic pollutants
- Plant science and toxicology
- Remote sensing
- Stress ecology in marine, freshwater and terrestrial ecosystems

- Trace metals and organics in biogeochemical cycles
- Waste and water treatment

The [editors](#) discourage [submission](#) of papers which describe results from routine surveys or monitoring programs, studies which are local in scope, laboratory experiments, hydroponic or pot studies measuring biochemical/physiological endpoints, food science studies, screening of new plant species for phytoremediation, testing known chemicals in another setting, and experimental studies lacking a testable hypothesis.

The abstract, highlights and conclusions of papers in this journal must contain clear and concise statements as to why the study was done and how readers will benefit from the results. Articles submitted for publication in *Science of the Total Environment* should establish connections among research findings with implications for environmental quality, ecological health, and/or human health.

## AUDIENCE

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Environmental Scientists, Environmental Toxicologists, Ecologists, Chemical/Environmental Engineers, Environmental Health Scientists and Epidemiologists, Risk Scientists, Environmental Science Managers and Administrators.

## IMPACT FACTOR

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2016: 4.900 © Thomson Reuters Journal Citation Reports 2017

## ABSTRACTING AND INDEXING

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Biology & Environmental Sciences  
Elsevier BIOBASE  
Current Contents/Agriculture, Biology & Environmental Sciences  
MEDLINE®  
Meteorological and Geostrophysical Abstracts  
EMBASE  
Environmental Periodicals Bibliography  
Oceanographic Literature Review  
PASCAL/CNRS  
Selected Water Resources Abstracts  
Sociedad Iberoamericana de Informacion Cientifica (SIIC) Data Bases  
Scopus  
CSA Technology Research Database

## EDITORIAL BOARD

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Organic Contaminants; Pesticides; Emerging Contaminants; Adsorption; Transformation; Mitigation; Water Quality; Aquatic Toxicology; Remediation; Biochar.

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**Ettore Capri**, Università Cattolica del Sacro Cuore, Piacenza, Italy

**Jianmin Chen**, Fudan University, Shanghai, China

Gaseous and particulate air monitoring and chemistry (particularly urban), secondary aerosol, haze formation and fog chemistry, human toxicity of atmospheric particulates, aerosols and climate impacts

**Adrian Covaci**, University of Antwerp, Wilrijk, Belgium

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**Lidia Morawska**, Queensland University of Technology, Brisbane, Queensland, Australia  
air pollution, air quality, indoor air pollution, exposure assessment, contaminated particulates, VOC, anthropogenic, characterization, automotive, apportionment, pollution transport, monitoring, analytical

**Wei Ouyang**, Beijing Normal University, Beijing, China  
Water environment and climate risk, diffuse pollution assessment

**Elena Paoletti**, National Research Council of Italy (CNR), Firenze, Italy  
Plant ecophysiology Effects of pollutants (ozone, UV-B, metals, acidic deposition, and surfactants) and climate change (drought, frost) on forests and trees (gas exchange, water relations, cuticles, roots, ectomycorrhizas, growth and pollen)

**Yolanda Picó**, Universitat de València, Valencia, Spain  
Media / Habitats: drinking water, water quality, water pollution, rivers, lakes, sediments, watersheds, soils, exposure assessment, human health effects, biomarkers, bioindicators, dietary exposure, food contamination, food safety Human Health Effects: pesticides, endocrine disruptors, pharmaceutical residues, organics, analytical, surveys

**Simon Pollard**, Cranfield University, Cranfield, Bedfordshire, England, UK  
Risk analysis, risk management, remediation, environmental policy, environmental decision sciences, environmental technology, regulation

**Charlotte Poschenrieder**, Universitat Autònoma de Barcelona (UAB), Bellaterra, Spain

**Ajit Sarmah**, University of Auckland, Auckland, New Zealand

**Scott Sheridan**, Kent State University, Kent, Ohio, USA  
Human biometeorology, climate change, synoptic climatology, extreme temperature events

**Helena Solo-Gabriele**, University of Miami, Coral Gables, Florida, USA  
Relationships Between the Environment and Health. Contaminant Fate and Transport. Microbial Contaminants in the Environment and Their Transmission Pathways. Oceans and Human Health. Environmental and Human Health Impacts of Heavy Metals including those from pressure treated wood. Environmental Hydrology.

**Filip Tack**, Universiteit Gent, Gent, Belgium  
Heavy metals, trace element biogeochemistry, dredged materials, soil and sediment remediation, phytoremediation

**Kevin Thomas**, University of Queensland, Queensland, Australia

**Xuexi Tie**, National Center for Atmospheric Research, Boulder, Colorado, USA  
Atmospheric chemistry, Numerical models of atmospheric dynamic and chemistry, Atmospheric gas/aerosol pollutions

**Daniel A. Wunderlin**, Universidad Nacional de Córdoba, Córdoba, Argentina

**Editorial Board**

**Jésus Ramon Aboal Viñas**, Universidade de Santiago de Compostela, Santiago de Compostela, Spain  
biomonitoring, moss biomonitoring, raptor biomonitoring, heavy metal contamination, cellular localization of metals, hydrological fluxes of forest canopies.

**Takashi Azuma**, Osaka University of Pharmaceutical Sciences, Osaka, Japan

**Roya Bahreini**, University of California at Riverside, Riverside, California, USA  
Aerosols, air pollution

**Carlos Barata**, IDAEA-CSIC, Barcelona, Spain  
Analytical chemistry, aquatic toxicology, environmental risk assessment, and toxicogenomics

**Roberto Bargagli**, Università degli Studi di Siena, Siena, Italy  
environmental biogeochemistry, active and passive biomonitoring of persistent contaminants in terrestrial and aquatic ecosystems

**Georgios Bartzas**, National Technical University of Athens (NTUA), Athens, Greece  
Expertise in Waste management, Environmental monitoring and Risk assessment, Life cycle analysis, Soil decontamination, Geochemical and Thermodynamic modelling and Groundwater pollution

**Ivan Bergier**, EMBRAPA Brazil, Corumbá, Brazil  
expertise in sustainable development, particularly in the following areas: environmental services, ecology and biogeochemistry of ecosystems and agroecosystems, bioenergy, biofuels, biochar, remote sensing, and electron microscopy applied to nanotechnology, electronics and automation, climate change adaptation and mitigation of greenhouse gases emissions.

**Harald Biester**, Technische Universität Braunschweig, Braunschweig, Germany  
Geoecology, sediment cores, mercury, trace metals

**Julian Blasco**, Instituto de Ciencias Marinas de Andalucía (CSIC), Puerto Real (Cádiz), Spain

**Paul Bradley**, U.S. Geological Survey (USGS), Columbia, South Carolina, USA

**Cristina M. Branquinho**, Universidade de Lisboa, Lisbon, Portugal

air quality, water quality, forests, ecological effects, bioavailability, bioindicators, PAHs, Dioxin, nutrients, copper, natural, anthropogenic, diffuse, apportionment, bioremediation, restoration, climate change, eutrophication, desertification, deforestation, monitoring, sequential extraction, remote sensing, moss biomonitoring, lichens, tree rings (dendrochronology), historical monitoring, Africa, Western Europe, Mediterranean region, South America

**Satinder Brar Kaur**, Institut National de la Recherche Scientifique (INRS), Québec, Quebec, Canada

Development of finished products (formulations) of wastewater and wastewater sludge based value-added bioproducts, such as enzymes, organic acids, platform chemicals, biocontrol agents, biopesticides, butanol and biohydrogen

**Birgit Braune**, Carleton University, Ottawa, Ontario, Canada

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

**Bryan W. Brooks**, Baylor University, Waco, Texas, USA

Water Quality, Environmental and Aquatic Eco-Toxicology, Risk and Hazard Assessment, Comparative Pharmacology and Toxicology, Environmental Public Health, Harmful Algal Blooms, Green and Sustainable Chemistry, Urban and Aquatic Ecology, Water Reuse.

**Giorgio Buonanno**, University of Cassino, Cassino (FR), Italy

10.020: air pollution, 10.030: air quality, 10.040: indoor air pollution, 70.040: clean technologies, 80.050: incineration

**Joanna Burger**, Rutgers University, Piscataway, New Jersey, USA

Eco-toxicology, behaviour, monitoring and assessment, birds and reptiles

**Glòria Caminal**, Universitat Autònoma de Barcelona (UAB), Barcelona, Spain

Biochemical engineering and environmental engineering this last focused on biodegradation of pollutants by microorganisms or enzymes. Bioreactors, immobilization, kinetics, etc.

**Art Chappelka**, Auburn University, Auburn, Alabama, USA

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

**Baoliang Chen**, Zhejiang University, Hangzhou, China

**Da Chen**, Southern Illinois University at Carbondale, Carbondale, Illinois, USA

Environmental analytical chemistry, ecotoxicology, fate and transport, emerging organic contaminants

**Wei Chen**, Nankai University, Jinnan District, Tianjin, China

Nanoparticles, toxicity

**Joaquín Cocheró**, Universidad Nacional de La Plata, La Plata, Buenos Aires, Argentina

**Rui Coutinho**, Universidade Dos Açores, Ponta Delgada, Portugal

Hydrogeology, Volcanology, Natural Hazards, Water Resources Management, Environmental Geology.

**Xinyi (Lizzy) Cui**, Nanjing University, Nanjing, China

Organics, bioavailability

**Guido Del Moro**, National Research Council of Italy (CNR), Bari, Italy

novel processes for wastewater treatment, aerobic granular biomass technologies, integration of chemical oxidation and biological processes for industrial wastewater, advanced oxidation processes, electro-degradation processes, wastewater treatment modelling

**José L. Domingo**, Universitat Rovira i Virgili, Reus, Catalonia, Spain

**Margaret Eng**, University of Saskatchewan, Saskatoon, Saskatchewan, Canada

Avian toxicology; wildlife toxicology; utilizing molecular and physiological tools in ecotoxicology; long-term effects of early developmental exposure; neurological and behavioral effects of contaminants; flame retardants, pesticides, dioxin-like compounds, methylmercury.

**Jose Angel Fernández**, Universidade de Santiago de Compostela, Santiago de Compostela, Spain

air pollution, air quality, water pollution, rivers, ecological effects, bioavailability, bioindicators, aquatic toxicology, heavy metals, biomagnification, bioaccumulation, surveys, moss, biomonitoring, Western Europe

**Jean-Francois Focant**, Université de Liège, Liège (Sart-Tilman), Belgium

exposure assessment, dietary exposure, food contamination, Human Health Effects, POPs, VOC, PCBs, Dioxin, analytical, measurement methods

**Jorge Gardea-Torresdey**, University of Texas at El Paso, El Paso, Texas, USA

Applications of spectroscopy techniques in environmental chemistry; phytoremediation, novel methods for the bioproduction of nanoparticles, development of analytical methods to detect nanomaterials, study of the fate of nanoparticles in the environment, and applications of nanotechnology to clean water among others

**Leobardo Manuel Gomez Oliván**, New Mexico State University, Toluca, Mexico

**Daren Gooddy**, British Geological Survey, Oxfordshire, England, UK

**Andrew Gray**, University of California at Riverside, Riverside, California, USA

Sediment transport, hydrology

**John Gulliver**, Imperial College London, London, UK

noise and air pollution exposure assessment, air pollution monitoring, dispersion modelling, land use regression modelling, geographical information systems, geo-statistical techniques (Kriging etc.), spatial analysis of environmental and health data. More broadly: geographical studies of environment and health, health risk assessments.

**Ying Guo**, New York State Department of Health (NYSDOH), Albany, New York, USA

My research interests: (1) biomonitoring organic chemicals in human body, such as phthalates, PAHs, organophosphate pesticide and environmental phenols; (2) monitoring organic pollutants in environment, e.g., persistent organic pollutants; (3) Analytical method development for novel organic contaminants in various environmental matrix. Recently, I am working on Exposome to women with fertility problems.

**Neil S. Harris**, University of Alberta, Edmonton, Alberta, Canada

Expertise: cadmium, micronutrients, membrane transporters, trace metal uptake and translocation in plants

**Roy M. Harrison**, University of Birmingham, Birmingham, UK

Air Pollution; Atmospheric Science; Environmental Health; Environmental Chemistry; Aerosol Science

**Gerard Hoek**, Utrecht University, Utrecht, Netherlands

exposure assessment, air pollution modeling, environmental epidemiology

**Peter Hooda**, Kingston University, Kingston upon Thames, England, UK

Biogeochemical Cycling of Nutrients and Environmental Contaminants; Catchment Water Quality; Land Degradation; Climate Change Impacts on Soil Processes; Emerging Contaminants

**Kiril Hristovski**, Arizona State University, Tempe, Arizona, USA

Environmental Applications and Implications of Nanomaterials; Water/Wastewater Quality and Treatment; Solid and Hazardous Waste; Management of Environmental Systems in Developing Countries.

**Rong Ji**, Nanjing University, Nanjing, China

Organics, terrestrial

**Sunny Jiang**, University of California, Irvine, California, USA

Pathogens, water treatment

**Weiyang Jiang**, California Environmental Protection Agency, Sacramento, California, USA

Organics, pesticides, dust, analytics

**Begoña Jiménez**, Consejo Superior de Investigaciones Científicas (CSIC), Madrid, Spain

**Sarah Jovan**, Pacific Northwest Forest Inventory and Analysis (PNW-FIA), Portland, Oregon, USA

My greatest expertise is in using lichen community composition for monitoring and quantifying nitrogen pollutants. But I also work with lichen/moss tissue assays (for N, S, metals, PAHs), landscape-scale community-based gradient modeling more generally, and biomass modeling for ground-dwelling non-vascular communities in boreal and tundra systems.

**Athanasios Katsoyiannis**, European Commission Joint Research Centre (JRC), Ispra (VA), Italy

expertise on the occurrence, fate and source identification of organic contaminants (especially PCBs, PBDEs, PAHs and VOCs) in all environmental compartments.

**Mary Beth Kirkham**, Kansas State University, Manhattan, Kansas, USA

soil-plant-water relations; drought stress; elevated carbon dioxide; uptake of heavy metals by plants

**Charles Knapp**, University of Strathclyde, Glasgow, Scotland, UK

ecological effects, bacteria, microorganisms, wastewater, nutrients, eutrophication

**D. Kolpin**, Iowa City, Iowa, USA

**Ewa Korzeniewska**, University of Warmia and Mazury, Olsztyn, Poland

Air pollution quality and human health; Contaminant (bio)monitoring and assessment; Ecotoxicology and risk assessment; Environmental management and policy; Human health risk assessment and management; Waste and water treatment

**Prashant Kumar**, University of Surrey, Guildford, Surrey, UK

Air quality and health; Airborne ultrafine and nanoparticles; Exposure assessment; Low-cost pollution sensing; Exhaust and non-exhaust emissions; Air pollution control; Grey-grey infrastructure interactions; Indoor air quality; Dispersion modelling; Urban nexus; Future cities/megacities

**Keisuke Kuroda**, National Institute for Environmental Studies, Fukushima, Japan

Subsurface geochemistry and mitigation technologies of contaminants of emerging concern (CECs)

**James Lam**, The Education University of Hong Kong, Tai Po, New Territories, Hong Kong

POPs, emerging contaminants

**Dimitra Lambropoulou**, Aristotle University of Thessaloniki, Thessaloniki, Greece

Emerging Contaminants, Organic Pollutants, Transformation Products, Environmental fate, Sample preparation and analysis, Advanced mass spectrometry techniques, Environmental monitoring and risk assessment, water quality, Treatment processes for water and wastewaters

**Joakim Larsson**, Göteborgs Universitet, Göteborg, Sweden

aquatic toxicology, pharmaceutical residues

**Juying Li**, Shenzhen University, Shenzhen, Guangdong, China  
Organics, bioavailability, isotopes, analysis

**Shibin Li**, U.S. Environmental Protection Agency (EPA), Duluth, Minnesota, USA  
Environmental toxicology, Environmental chemistry, Environmental remediation, nanomaterials, and Chemical risk assessment

**Daohui Lin**, Zhejiang University, Hangzhou, China  
Organic matter, nanoparticles, sorption

**Kunde Lin**, Xiamen University, Xiamen City, Fujian 361102, China  
Organics, biosynthesis, catalysis

**Weiping Liu**, Zhejiang University, Hangzhou, China  
Organics, monitoring, human health, ecotoxicology

**Xiaobo Liu**, The University of Hong Kong, Hong Kong SAR, China  
Applied food microbiology, Biofuels and biomass, Environmental microbiology, Food fermentation engineering, Microbial biotechnology, Wastewater treatment

**Sheila Macfie**, Western University, London, Ontario, Canada  
Metal toxicity and tolerance in plants; Synchrotron radiation techniques; Rhizosphere chemistry

**A. Markus**, Deltares, Delft and University of Amsterdam, The Netherlands

**Jonathan Martin**, University of Alberta, Edmonton, Alberta, Canada  
Analytical environmental chemistry, perfluorinated compounds, bioaccumulation, toxicology and environmental chemistry

**Ioannis Matiatos**, International Atomic Energy Agency (IAEA), Vienna, Austria  
isotope hydrology, water resources management, hydrogeochemistry, groundwater modeling, applied statistical modeling, climate change impact and environmental monitoring

**Janine McCartney**, HHC Services Inc., Lester, Pennsylvania, USA

**Thomas Meinelt**, Institute of Freshwater Ecology and Inland Fisheries, Berlin, Germany  
Alternative treatments in aquaculture, Impact (and interaction) of humic substances on environment and animals.

**Derek Muir**, National Water Research Institute (NWRI), Burlington, Ontario, Canada  
Environmental chemistry, biogeochemistry, bioaccumulation, persistent organic pollutants, chemicals of emerging concern, chemical inventories, mercury, polycyclic aromatic compounds, Arctic, marine mammals, fish

**Jacek Namieśnik**, Technical University of Gdansk, Gdansk, Poland  
environmental analytics and monitoring, food analysis, QA/QC systems, green analytical chemistry, envirometrics

**Howard S. Neufeld**, Appalachian State University, Boone, North Carolina, USA  
1. Over 25 years of research on the effects of ozone on plants 2. Research on the role of anthocyanins in vegetative tissues in plants 3. Climate change impacts on plants in the southern Appalachian mountains 4. My technical expertise resides in measuring plant gas exchange and plant water relations, using the Li-Cor 6400 gas exchange system, a Sperry hydraulic conductivity apparatus and Scholander pressure chamber, as well as a variety of other instrumentation (including leaf fluorescence meter) to monitor plant responses to environmental stresses.

**Huu Hao Ngo**, University of Technology Sydney, Ultimo, New South Wales, Australia  
water and wastewater treatment and reuse technologies, alternative water resources, water management and impact assessment, solid waste management, specific green technologies: water – waste – energy nexus and greenhouse gas emission control and minimisation.

**Hong-Gang Ni**, Peking University, Shenzhen, China  
His research interests focus on the environmental behavior and fate, human exposure and health risk of organic pollutants. My research interests focus on the environmental behavior and fate, human exposure and health risk of organic pollutants. My personal keywords: organic pollutants (persistent organic pollutants and environmental molecular markers); environmental model (process and impact); human exposure and health risk.

**Fernando Pacheco Torgal**, University of Minho, Guimarães, Portugal

**Momir Paunovic**, University of Belgrade, Beograd, Serbia  
hydrobiology, aquatic macroinvertebrates, freshwater mollusks, invasive aquatic species, feeding of benthivorous fish, functional analyses of aquatic ecosystems, relation of aquatic biota and environmental variables, bio-monitoring in freshwater, genotoxicological investigations on aquatic organisms and microbiology of freshwaters.

**Alexandra Pavlidou**, Hellenic Centre for Marine Research, Mavro Lithari, Anavyssos, Greece  
Eutrophication and eutrophication indexes according to WFD and MSFD, biogeochemical cycles and nutrient dynamics in marine environments (coastal and open sea)

**Alexandre R. Péry**, AgroParisTech, Paris, France

Toxicokinetic modelling; Toxicodynamic modelling; Ecotoxicology; Mixtures; Integrated risk assessment

**Maria Pignata**, Universidad Nacional de Cordoba (Argentina), Cordoba, Argentina  
Human Health Effects: pesticides, endocrine disruptors, pharmaceutical residues, organics, analytical, surveys

**Xavier Querol**, Consejo Superior de Investigaciones Científicas (CSIC), Barcelona, Spain  
Air Quality, Particulate matter, Heavy metals, source apportionment, air quality policy

**Clemens Reimann**, Norges geologiske undersøkelse - NGU, Trondheim, Norway  
Geochemistry, Environmental Geochemistry, Biogeochemistry, Hydrogeochemistry, Regional Geochemistry, Geochemical mapping, Critical Zone Research, Soil chemistry

**Eric Reiner**, Ontario Ministry of the Environment, Toronto, Ontario, Canada  
Gas Chromatography, Liquid Chromatography, mass spectrometry, Quality Control / Quality Assurance, Environmental Analysis.

**Tiina Reponen**, University of Cincinnati, Cincinnati, Ohio, USA  
Indoor air pollution, exposure assessment, bacteria, microorganisms, biohazards, monitoring

**Robert Risebrough**  
**Chelsea M. Rochman**, University of California, Davis, Davis, California, USA  
Marine debris, plastic debris, persistent organic pollutants, aquatic toxicology, marine ecotoxicology

**David Roser**, UNSW Australia, Sydney, New South Wales, Australia

**S. Sabater**, University of Girona (UdG) and ICRA, Girona, Spain

**M<sup>a</sup> Jesús Sánchez-Martín**, IRNASA, CSIC, Salamanca, Spain  
Pesticides, soil, water, organic amendments; Adsorption, desorption, degradation, mobility; Soil and water contamination by pesticides and emerging pollutants; Behaviour of pesticides in soils; Influence of organic amendments

**Nan Sang**, Shanxi University, Taiyuan, Shanxi, China  
Environmental exposure and health risk of chemicals; Biological effect and toxic mechanism of environmental chemicals

**Ralf Bernhard Schäfer**, Universität Koblenz-Landau, Landau, Germany  
water quality, water pollution, rivers, ecological effects, sensitive populations, susceptibility to pollutants, cumulative effects, aquatic toxicology, PAHs, pesticides, microorganisms, anthropogenic, diffuse, non-point, climate change, geographic information system (GIS), modeling, monitoring, Western Europe, Australasia

**Gabriele Schaumann**, Universität Koblenz-Landau, Landau, Germany  
Soil quality in agricultural practices; Engineered nanoparticles in the Environment Soil Chemistry, soil organic matter Fate and transformation of organic and inorganic pollutants

**Jianwen She**, California Department of Public Health, Richmond, California, USA  
Bioanalytics, POPS, human health

**Wei Shi**, Nanjing University, Nanjing, China  
Environmental fate of emerging organic pollutants; Effect directed analysis based on instrumental analysis and bioassays

**Luis Felipe Silva Oliveira**, Canoas, RS - Brazil

**Andreas Skouloudis**  
**Athanasios S. Stasinakis**, University of the Aegean, Mytilene, Greece

**Marianne Stuart**, British Geological Survey, Keyworth, Nottingham, UK  
Groundwater pollution, Agrochemicals, Emerging contaminants in groundwater, Industrial contaminants in groundwater, Shale gas exploitation.

**Piotr Szefer**, Medical University of Gdańsk, Gdańsk, Poland  
- Biomagnification of major and minor elements along the sequential trophic levels of the marine biosphere. - Bioavailability of metallic pollutants to benthic organisms as potential biomonitors in relation to the adjacent sediments and sea water. - Chemometric evaluation of the distribution of essential, toxic elements and other pollutants in the marine ecosystems. - Evaluation of chemical elements relationships in their horizontal and vertical distribution in the marine sediments. . - Chemometric evaluation of marine organisms as potential biomonitors of chemical pollution of the aquatic ecosystems worldwide.

**Phong Thai**, Queensland University of Technology, Brisbane, Queensland, Australia

**Maria Concetta Tomei**, National Research Council of Italy (CNR), Roma, Italy  
Processes and Technologies for Urban and Industrial Wastewater Treatment; Modelling and Control of Biological Processes, Treatment of Xenobiotic Compounds, Two-Phase Partitioning Bioreactors (TPPBs); Sludge Treatment; Soil Bioremediation

**Ashley Townsend**, University of Tasmania, Hobart, Tasmania, Australia  
Environmental analysis, geochemistry, oceanography, marine and Antarctic science, materials science, and human health areas

**Richard Van Curen**, University of California, Davis, Davis, California, USA

Aerosol Science, atmospheric pollution, climate science, atmospheric modeling

**Paola Verlicchi**, Università di Ferrara, Ferrara, Italy

Water treatment

**Wei (Vivienne) Wang**, Zhejiang University, Hangzhou, China

Pesticides, bioavailability, biodegradation, analysis

**Shaun Watmough**, Trent University, Peterborough, Ontario, Canada

Ecosystem biogeochemistry; ecological impact of trace metals; ecosystem acidification; air pollution impacts on ecosystems

**Ishwar Chandra Yadav**, Tokyo University of Agriculture and Technology, Tokyo, Japan

**Kun Yang**, Zhejiang University, Hangzhou, China

Organics, adsorption, organic matter

**Samantha Ying**, University of California at Riverside, Riverside, California, USA

Trace elements, arsenic, biogeochemistry

**Jing You**, Jinan University, China

Organics, ecotoxicology, bioavailability

**Teng Zeng**, Stanford University, Stanford, California, USA

Contaminants of emerging concern, Drinking water disinfection, Wastewater reuse

**Chaosheng Zhang**, National University of Ireland, Galway, Ireland

Spatial analysis of environmental variables and health; Heavy metals, phosphorus, organic carbon in soils/sediments; Precision Agriculture; Diffusive gradients in thin films (DGT)

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

Organics, ecotoxicity, bioavailability, analysis

**Xiaowei Zhang**, Nanjing University, Nanjing, China

Toxicogenomics of chemicals, Ecogenomics of pollution, Ecotoxicology

**Yong Zhang**, Xiamen University, Xiamen City, Fujian 361102, China

PAHs, organic matter, marine environments



## GUIDE FOR AUTHORS

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### *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

### *Aims and Scope*

*Science of the Total Environment* is an international journal for publication of original research on the **total environment**, which includes the **atmosphere, hydrosphere, biosphere, lithosphere, and anthroposphere**.

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The total environment is characterized where these five spheres overlap. Studies that focus on at least two or three of these will be given primary consideration. Papers reporting results from only one sphere will not be considered. Field studies are given priority over laboratory studies. The total environment is studied when data are collected and described from these five spheres. By definition total environment studies must be multidisciplinary.

Examples of data from the five spheres are given below:

[stoten-banners.jpg](#)-The five spheres of the total environment

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- Air pollution quality and human health
- Contaminant (bio)monitoring and assessment
- Ecosystem services and life cycle assessments
- Ecotoxicology and risk assessment
- Emerging fields including global change and contaminants
- Environmental management and policy
- Environmental remediation
- Environmental sources, processes and global cycling
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The **editors** discourage **submission** of papers which describe results from routine surveys or monitoring programs, studies which are local in scope, laboratory experiments, hydroponic or pot studies measuring biochemical/physiological endpoints, food science studies, screening of new plant species for phytoremediation, testing known chemicals in another setting, and experimental studies lacking a testable hypothesis.

The abstract, highlights and conclusions of papers in this journal must contain clear and concise statements as to why the study was done and how readers will benefit from the results. Articles submitted for publication in *Science of the Total Environment* should establish connections among research findings with implications for environmental quality, ecological health, and/or human health.

## Types of paper

**Full papers** reporting original and previously unpublished work.

**Short Communications.** A brief communication of urgent matter or the reporting of preliminary findings to be given expedited publication.

**Letters to the Editor.** A written discussion of papers published in the journal. Letters are accepted on the basis of new insights on the particular topic, relevance to the published paper and timeliness.

**Reviews.** Critical evaluation of existing data, defined topics or emerging fields of investigation, critical issues of public concern, sometimes including the historical development of topics. Those wishing to prepare a review should first consult the Editors or Associate Editors concerning acceptability of topic and length.

**Discussion.** Opinionated exposition on an important scientific issue or event designed to stimulate further discussion in a broader scientific forum.

**Special Issues.** Proceedings of symposia, workshops and/or conferences will be considered for publication as a special issue. An Editor or Associate Editor should be contacted early in the conference planning process to get approval and for guidelines on special issues of the journal.

**Book Reviews** will be included in the Journal on a range of relevant books which are not more than two years old. Book reviews are handled by the Journal Editors. Unsolicited reviews will not usually be accepted, but suggestions for appropriate books for review may be sent to one of the Editors.

## 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)
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