SCIENCE OF THE TOTAL ENVIRONMENT
An International Journal for Scientific Research into the Environment and its Relationship with Humankind

TABLE OF CONTENTS
- Description p.1
- Audience p.2
- Impact Factor p.2
- Abstracting and Indexing p.2
- Editorial Board p.2
- Guide for Authors p.10

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.

totalenvironment.gif

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

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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ABSTRACTING AND INDEXING

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Selected Water Resources Abstracts
Sociedad Iberoamericana de Informacion Cientifica (SIIC) Data Bases
Elsevier BIOBASE
Meteorological and Geoastrophysical Abstracts
Scopus

EDITORIAL BOARD

Co-Editors in Chief:
Damià Barceló, Consejo Superior de Investigaciones Científicas (CSIC), Barcelona, Spain
Environmental analysis; Water and soil quality; Organic mass spectrometry; Emerging organic contaminants; Nanomaterials; Biosensors for: Analysis, Fate and Risk of Emerging Pollutants such as Pharmaceuticals and Nanomaterials in the Environment Water Pollution Control and Protection Bridging analytical chemistry with ecotoxicology - toxicity identification; Evaluation techniques used: GC and LC tandem MS, biosensors, sample preparation, automated on-line techniques for water analysis environmental samples (water, including marine waters, sediments soils, biota samples)
Jay Gan, University of California at Riverside, Riverside, California, USA
Organic Contaminants; Pesticides; Emerging Contaminants; Adsorption; Transformation; Mitigation; Water Quality; Aquatic Toxicology; Remediation; Biochar.

Special Issues Editor
Elena Paoletti, National Research Council of Italy (CNR), Firenze, Italy
Associate Editors

**Baoliang Chen**, Zhejiang University, Hangzhou, China
Soil pollution control and remediation; Traditional and novel functional materials and environmental applications (biochar, graphene, biosorbent, and organoclay); Sorption and reactions of organic and inorganic contaminants with natural and synthesised media; Novel membrane and pollutant abatement

**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

**Frederic Coulon**, Cranfield University, Cranfield, Bedfordshire, England, UK
Remediation, hazardous waste, water and wastewater treatment; Risk assessment and remediation; Bioaerosols; Hydrocarbons; Environmental microbiology; Antarctic science

**Adrian Covaci**, University of Antwerp, Wilrijk, Belgium
Human exposure; Exposure assessment; Human health effects; Biomarkers; Food safety; Biomonitoring; Indoor pollution; Emerging contaminants; Legacy contaminants; Wastewater epidemiology

**Xinbin Feng**, Chinese Academy of Sciences (CAS), Guiyang, China
Mercury biogeochemical cycling in the environment and its health impact; Mercury stable isotope geochemistry and remediation of mercury contaminated lands; Cd, Pb, As and Sb biogeochemical cycling in the environment

**José Virgílio Matos Figueira Cruz**, University of the Azores, Ponta Delgada, Portugal
Groundwater geology; Groundwater geochemistry; Surface water chemistry; Water quality; Water pollution; Water management; Water planning

**Ashantha Goonetilleke**, Queensland University of Technology, Brisbane, Queensland, Australia
Water quality; Water pollution; Water reuse; Water treatment; Stormwater pollutant processes; Integrated Water Resources Management; Water infrastructure resilience; climate change adaptation

**Mae Gustin**, University of Nevada at Reno, Reno, Nevada, USA
Biogeochemical cycling of mercury, metals, and isotopes; Air pollution

**Zhen (Jason) He**, Virginia Tech, Blacksburg, Virginia, USA
Water pollution and treatment; Environmental biotechnology; Resource recovery from wastes; Bioelectrochemical systems; Bioenergy; Membrane technology; Bioremediation; Desalination

**Patricia A. Holden**, University of California, Santa Barbara, California, USA

**Henner Hollert**, RWTH Aachen University (RWTH), Aachen, Germany
Bioanalytical environmental toxicology; Aquatic toxicology; Triad (Weight of evidence) approaches; Effect directed analysis; Sediments; In-situ investigations and monitoring; In-vitro bioassays; Waste- and ground water investigations (advanced wastewater treatment); Ecology

**Ching-Hua Huang**, Georgia Institute of Technology, Atlanta, Georgia, USA
Environmental chemistry; Water quality; Physicochemical treatment processes; Drinking water quality; Wastewater reuse; Contaminants of emerging concern; Reaction kinetics and mechanism

**Wei Huang**, Peking University, Beijing, China
Exposure assessment; Environmental epidemiology; Health intervention

**Pavlos Kassomenos**, University of Ioannina, Ioannina, Greece
Air pollution; Meteorology; Environmental health; Climate change; Particulates; Ozone; Bioaerosols; Dust transportation; Vehicle emissions; Noise

**Ralf Ludwig**, Ludwig-Maximilians-Universität München (LMU), München, Germany
Air pollution; Air quality; Indoor air pollution; Exposure assessment; Contaminated particulates; VOC; anthropogenic; Characterization; Automotive; Apportionment; Pollution transport; Monitoring: Analytical

**Jose Julio Ortega-Calvo**, Consejo Superior de Investigaciones Científicas (CSIC), Sevilla, Spain

**Wei Ouyang**, Beijing Normal University, Beijing, China
Water environment and climate risk; Watershed environment management; Non-point source modeling and control; Diffuse pollution assessment

**Elena Paoletti**, National Research Council of Italy (CNR), Firenze, Italy
Plant health; Plant ecophysiology; Forests; Climate stressors; Air pollution impacts on terrestrial ecosystems; BVOC; ground-level ozone

**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
Charlotte Poschenrieder, Universitat Autònoma de Barcelona (UAB), Bellaterra, Spain
Sergi Sabater, Institut Català de Recerca de l’Aigua ICRA, Girona, Spain
River and stream ecology; Biofilm ecology and ecotoxicology; Mediterranean; Water scarcity; Ecosystem functioning; Biodiversity; Conservation of rivers
Scott Sheridan, Kent State University, Kent, Ohio, USA
Human biometeorology, climate change, synoptic climatology, extreme temperature events
Filip M. G. Tack, Universiteit Gent, Gent, Belgium
Heavy metals; Trace element biogeochemistry; Dredged materials; Soil and sediment remediation; Phytoremediation
Kevin Thomas, University of Queensland, Wooloongabba, Queensland, Australia
Contaminants of emerging concern; Non-target analysis; High resolution Mass Spectrometry; Microplastics; Biomonitoring
Paola Verlicchi, Università di Ferrara, Ferrara, Italy
Water treatment; Wastewater treatments; Reuse of reclaimed water; Occurrence and removal of pharmaceuticals from (waste)water; Hospital effluent management and treatment; Petrochemical wastewater treatment; Environmental risk assessment
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Editorial Board
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Biomonitration; Moss biomonitoring; Raptor biomonitoring; Algae biomonitoring; PAHs contamination; Heavy metal contamination; Cellular localization of metals; Hydrological fluxes of forest canopies
Souhail R. Al-Abed, U.S. Environmental Protection Agency (EPA), Cincinnati, Ohio, USA
Environmental implication and applications of nanomaterials; Sediment and water remediation; Contaminant (metals and organics) transformations in the environment; Reuse of materials in environmental applications
Takashi Azuma, Osaka University of Pharmaceutical Sciences, Osaka, Japan

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Air pollution

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Analytical chemistry, aquatic toxicology, environmental risk assessment, and toxicogenomics

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environmental biogeochemistry, active and passive biomonitoring of persistent contaminants in terrestrial and aquatic ecosystems

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Expertise in Waste management; Environmental monitoring and Risk assessment; Life cycle analysis; Soil and Groundwater decontamination; Geochemical/Thermodynamic modelling; Environmental economics

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; Electron microscopy; Applied to nanotechnology, electronics and automation; Climate change adaptation; Mitigation of greenhouse gases emissions

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

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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

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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
Da Chen, Jinan University, Guangzhou, China
Environmental chemistry; analytical chemistry; ecotoxicology; persistent organic pollutants; flame retardants; pesticides; mass spectrometry; gas/liquid chromatography.
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Nanoparticles; Nanomaterials; Adsorption; Reactivity; Transport; Remediation; Groundwater; Soil; Organic contaminants
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Biofilm; Stream ecology; Biomonitoring; Urban streams; Citizen science
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Organics, bioavailability
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Hydrogeology, Volcanology, Natural Hazards, Water Resources Management, Environmental Geology.
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 Olivan, 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

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Pathogens, water treatment

**Weiying Jiang**, California Environmental Protection Agency, Sacramento, California, USA  
Organics, pesticides, dust, analytics

**Begoña Jiménez**, Consejo Superior de Investigaciones Científicas (CSIC), Madrid, Spain  
Persistent Organic Pollutants (POPs); Dioxins; PCBs; Fate of POPs; Contaminants of emerging concern; Organic pollutants in aquatic and terrestrial ecosystems; Bioindicators; Marine mammals; Air Pollution; Environmental chemistry; Monitoring

**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.

**Anna Jurado**, Technische Universität Dresden, Dresden, Germany  
Aquifer recharge quantification; Emerging organic contaminants; Greenhouse gases; Groundwater quality; Groundwater management; Urban groundwater; River-groundwater interaction; Managed aquifer recharge; Numerical modelling; Quantitative hydrogeology

**Athanasios Katsogiannis**, European Commission, Ispra (VA), Italy  
Development and optimisation of analytical chemistry techniques and sampling methodologies to the source understanding; Occurrence and fate of organic contaminants in all environmental compartments, including indoor air, atmospheric air, soil, water and/or wastewater

**Nerantzis Kazakis**, Aristotle University of Thessaloniki, Thessaloniki, Greece  
Groundwater modelling; Groundwater vulnerability; Hydrogeochemistry; Hydrogeophysics; Isotope hydrology; Water resources management; Floods; Climate change impacts on water resources; Managed Aquifer Recharge

**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

**Dana Kolpin**  
Endocrine disruptors, pharmaceutical residues, non-point, pollution transport, chemical transport

**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, Surrey, England, 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, Regulatory toxicology, Ecotoxicology, Exposure science, Risk assessment, Product safety

Daohui Lin, Zhejiang University, Hangzhou, China
Nanomaterials; Ecotoxicity; Nanotoxicity; Bioavailability; Colloidal behavior; Sorption

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

Weiping Liu, Zhejiang University, Hangzhou, China
Organoics, 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

Rasha Maal-Bared, EPCOR Water Services, Edmonton, Alberta, Canada
Applied and environmental microbiology; Freshwater microbiology; Drinking water and wastewater; Microorganisms; Pathogens; Biofilms; Antibiotic resistance; Water quality; Water pollution; Food safety; Monitoring

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

Sonia Manzo, ENEA, Portici, Italy
Ecotoxicology; Nanomaterials; Aquatic environment; Seawater; Microalgae; Seaurchin; Risk assessment

Adriaan Albert Markus, Deltares, Delft, Netherlands
Water quality modelling; Numerical modelling and programming in various languages (notably Fortran, in relation to numerical modelling); Transport and fate of nanoparticles and microplastics in the aquatic environment

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
Chemical Exposures: Toxic tort, Biomarkers, Industrial Hygiene, Employee chemical exposures and community chemical exposures, Safety Engineering; Arc Flash Analyses and Accidents; Electrical Safety; Falls; Equipment & Machinery; Human Factors; Accident Investigation/ Reconstruction; OSHA; Guarding; Construction; Industrial & Premises Accidents; Oil & Gas Extraction; Pipeline Safety and Refinery Safety; Lead and Electrocution

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, Environment and Climate Change Canada, 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
Eco-efficient construction and building materials; Construction and demolition wastes; Geopolymers; Waste recycling; Durability; Mechanical properties; Alkali-activated cement-based binders; Concrete nanotechnology

Anastasia K. Paschalidou, Democritus University of Thrace, Orestiada, Greece
Air pollution meteorology; Urban meteorology ; Dust transportation; Climate change; Environmental health / Environmental epidemiology; Biometeorology; Synoptic climatology; Dispersion Modeling; Air Quality Indices

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, Anavissos, 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

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

Anacleto Rizzo, IRIDRA, Florence, Italy
Constructed Wetland; Nature-Based Solution for Wastewater Treatment; Sustainable Water Management; Sustainable Sanitation Modelling; Sustainable Urban Drainage Systems; Water Sensitive Urban Design; Low Impact Development; Green Infrastructure; Ecosystem Service

Teresa Rocha-Santos, Universidade de Aveiro, Aveiro, Portugal
Micro(nano)plastic; Plastic; Microfibres; Organic contaminants; Marine monitoring; Environmental monitoring; Wastewater treatment; Biodegradation of microplastics; Sensors; Biosensors

Chelsea M. Rochman, UNSW Australia, Sydney, New South Wales, Australia
Marine debris, plastic debris, persistent organic pollutants, aquatic toxicology, marine ecotoxicology

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

Mª 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

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Environmental exposure and health risk of chemicals; Biological effect and toxic mechanism of environmental chemicals

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Water quality; Rivers; Ecological effects; Chemicals; Aquatic toxicology; Invertebrates; Microorganisms; Modelling; Statistics

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Soil quality in agricultural practices; Engineered nanoparticles in the Environment Soil Chemistry, soil organic matter Fate and transformation of organic and inorganic pollutants

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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, Universidad de la Costa (CUC), Barranquilla, Colombia
Nanothechnology in Real Samples (in special nanominerals and advanced electron bean); Soil and water researches; Atmosphere impacts (in special particulate matter)

Andreas Skouloudis
Athanasiou S. Stasinakis, University of the Aegean, Mytilene, Greece
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Groundwater pollution, Agrochemicals, Emerging contaminants in groundwater, Industrial contaminants in groundwater, Shale gas exploitation.

Qian Sui, East China University of Science and Technology, Shanghai, China
Pharmaceuticals and personal care products; Micro-plastics; Emerging contaminants; Analytical methods; Environmental behaviors; Source apportionment; Advanced oxidation processes; Treatment processes

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

Phong Thai, Queensland University of Technology, Brisbane, Queensland, Australia
Maria Concetta Tomei, Consiglio Nazionale delle Ricerche (CNR), Monterotondo Stazione, 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

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
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Yong Zhang, Xiamen University, Xiamen City, Fujian 361102, China
PAHs, organic matter, marine environments
GUIDE FOR AUTHORS

Your Paper Your Way

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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.

totalenvironment.gif-Total Environment

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

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.
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