JOURNAL OF HAZARDOUS MATERIALS

AUTHOR INFORMATION PACK

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DESCRIPTION

The Journal of Hazardous Materials is an international forum that advances world class research by publishing articles in the areas of Environmental Science and Engineering. We publish full-length research papers, review articles, and perspectives that improve our understanding of the hazards and risks that certain materials pose to public health and the environment. Papers that deal with ways of assessing environmental impact (Environmental Science) and risk mitigation (Environmental Engineering) of hazardous materials (HM) are within the scope of the journal. The Journal publishes high-impact contributions on:
Characterization of the harmful effects of chemicals and materials (including contaminants of emerging concern). Studies of harmful effects are restricted to their impact on model organisms or cell-based assays typically used in environmental science and engineering studies. Some examples of model organisms include, but are not limited to, plants, microbes (viruses, bacteria, fungi, algae), zooplankton, phytoplankton, zebrafish, and C. elegans Field studies monitoring HM concentrations and bioaccumulation in organisms or microorganisms to determine fate and impact of contaminants in the environment Advances in measurement and monitoring of HM with relevant numbers of replicates Transport, fate and removal or transformation of environmentally relevant concentrations of HM in the environment Physico-chemical and separation processes for HM removal Advanced Oxidation Process for HM Removal Thermal Processes for HM Removal Biological processes for HM removal including biodegradation and elucidation of biodegradation pathways. Demonstrated safer and cleaner technologies and biotechnologies with minimization of the environmental impact of HM Resource recovery (Energy and Materials) from HM with reduction of their environmental impact Modeling related to HM fate and transport

However, the following areas are excluded:
Non-hazardous materials Work place health and safety Municipal wastewater treatment research focusing on the removal of regular organic and nutrient compounds Greenhouse gas mitigation The manufacturing of explosives Epidemiological studies (e.g. studies involving patients or cohort studies) Fire/flame and/or flame retardants that do not focus on hazardous effects of the materials. Characterization of harmful effects on arthropods, reptiles, fish, birds or mammals (including humans), as well as tissues/organs/organelles (e.g. mitochondria) of such organisms, which would more effectively be conveyed in specialized journals Studies with a materials engineering focus that primarily deal with material synthesis, characterization, and utilization for contaminant sequestration under conditions that are not environmentally relevant or conducted with non-hazardous contaminants

Journal of Hazardous Materials is the companion title to the open access Journal of Hazardous Materials Letters.

AUDIENCE

Chemists, Chemical Engineers, Manufacturers of Chemicals, Designers of Chemical Plants, Local Authorities, Emergency Services, Transportation Services, Safety Engineers and Inspectors.

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Catalysis, Nanotechnology, Nanomaterial-biological interactions, Environmental Pathogens, Virology

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Ecotoxicity, soil toxicity, ecological risk assessment, microplastics, soil risk assessment
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Impacts of Hazardous Materials (Toxicity (cells, human) and Fate and Transport of Hazardous Materials (Heavy metals) all in PLANTS, plant physiology, phytoremediation
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Disinfection, disinfection byproduct, environmental analytical method, photolysis, membrane filtration, advanced oxidation/reduction process, organic nitrogen, organic halogen, and other drinking water issues.
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Analytical Chemistry, Surface-enhanced Raman scattering, Fluorescence probe and imaging, Paper-based analysis, Nanosensors, Molecular imprinting, Metal-organic framework, Analysis related to Heavy metals, Persistent organic pollutants, Polycyclic aromatic hydrocarbons, Pesticides, Herbicides, Pharmaceuticals including antibiotics, etc., Environmental Chemistry, Environmental analysis, Environmental monitoring, Preparation of adsorbents, Adsorption/Sorption, Wastewater treatment, Heavy metal removal, Nanotoxicology, Nanomaterial-biological interactions, Green chemistry, Green remediation, Bioremediation, Biodegradation, Biosorption, Microplastics, Nanoplastic, ,
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Yuming Guo, Monash University, Clayton, Australia
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Zaher Hashisho, University of Alberta, Edmonton, Alberta, Canada
expertise: adsorption, desorption, adsorbents, microwave chemistry, air pollution control, air quality, emissions of air pollutants and greenhouse gases, flux measurement.
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Bottom up design of adsorbent materials, Removal of contaminants of emerging concern, Ultra-purification of gases

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Microbial contaminants, Water quality, Water reuse, Wastewater, Anaerobic biotechnologies
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Emerging contaminants, Environmental photochemistry, Environmental chemistry and analysis, Transformation and risk of organic micropollutants, Water/wastewater treatment technology and reuse
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Environmental microbiology, bioremediation, emerging contaminants, aerobic, microbiome
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Environmental chemistry, Emerging contaminants, Persistent Organic Pollutants, Air-soil-water pollution, Fate and transport of contaminants, sorption-desorption, leaching, degradation of organic compounds in soil at laboratory and field scale. Phytoremediation. Contaminants in biota, sublethal effects of pollutants, biomarkers.
João M. M. N. Pinto da Costa, University of Aveiro, Aveiro, Portugal
Currently focused on the development of strategies for the correct assessment of the prevalence of emergent contaminants, namely, (micro)plastics, as well as their fate and behavior in the terrestrial and aquatic environments. Research interests also include the expansion of knowledge in bio-based approaches for the mitigation of plastic contamination (biodegradation of microplastics).
Jelena Radjenovic, Catalan Institute for Water Research, Girona, Spain
Nanotechnology-enabled water treatment, fate and removal of persistent organic, inorganic and microbial pollutants in advanced water and wastewater treatment, electrochemical technologies for water treatment and resource recovery
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Trace elements in the environment, Soil, Water, Plant, Environmental pollution
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Environmental Chemistry, Exposure Science, Biomarkers, PFAS, SVOCs
Meiping Tong, Peking University College of Environmental Science and Engineering, Beijing, China
Transport of nanoparticles, bacteria, microplastics in natural and engineered systems, Heteroaggregation of colloids, Toxicity of nanomaterials, Bacterial disinfection, Organic pollutant degradation, Heavy metal removal.
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Per- and polyfluoroalkyl substances, Emerging contaminants, Black carbon (biochar, charcoal), Granular activated carbon, Adsorption, Water Treatment, Coagulation and flocculation, Disinfection and disinfection byproducts, Microplastics
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Coastal Environmental Engineering; Oil and Emerging Contamination

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-Photocatalysis for water cleaning: photodegradation of organic pollutants -Photocatalysis for energy applications: production of hydrogen by photodegradation of water pollutants or products of biomass; dye-sensitized solar cells -New materials for adsorption and retention of pollutants from water.
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Microbial electrochemical technology; Electroactive biofilm; Anaerobic digestion; Nitrogen recovery, DNRA

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Chemical oxidation technology for Water Reuse and Toxicity evaluation and control technology

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Fenton reaction, Advanced oxidation processes, Photocatalysis, Refractory organics, Degradation mechanism, ,

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Yi Yang

Analysis, quantification, and characterization of nanoparticles in different environmental matrices, identification and source apportionment of nanoparticles in the environment, environmental behaviour of nanoparticles, anthropogenic particles, including microplastics and nanoparticles, antibiotic resistance genes

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System Integration and Optimisation, Life Cycle Assessment, Computing, Waste Management, Water Treatment

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photocatalysis, Solar fuel, Perovskite Solar cells, Electrocatalysis, Adsorption, Supercapacitor

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Bioremediation; Synthetic biology; Microbiome; Heavy metal; Bioaugmentation; Wasterwater treatment; Nanotoxicology; Pollutant detection

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Advanced oxidation processes (AOPs), Persulfate-based AOPs, Fenton-based AOPs, Electrochemical AOPs (EAOPs), Ozonation and ozone-based AOPs, Environmental catalysis, Soil/groundwater remediation.

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Diketone, Ligand effect, Photochemistry, Water treatment, Coagulation

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Eco-environmental and nano- geochemistry, Geomedicine and life sustainability, Ecotoxicology and environmental criteria, Advanced green materials and environmental remediation, Waste treatment and recycling technology

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Remediation, Wastewater, soil, Sediment, Contaminant

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Air Pollution Control

Webber Wei-Po Lai, Tunghai University, Taichung, Taiwan

emerging contaminants in aquatic environments, including trace analysis, environmental fate and development of novel green treatment technologies for water sustainability

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Antibiotic resistant bacteria and antibiotic resistance genes, Microbial ecology, Environmental microbiology, Metagenomics and metatranscriptomics, Microbial biotransformation of environmental contaminants

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fish biology, fish diseases, microplastics, emerging contaminants, trace elements, aquatic ecotoxicology, high-mountain lakes, freshwater ecology, aquatic biodiversity, environmental chemistry

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creating low-cost, engineered media to remove and/or degrade contaminants in urban stormwater

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Biogeochemistry; Environmental Chemistry; Bioremediation; Resource Biorecovery; Contaminants Fate and Transport

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water quality conversion and research methods, water risk assessment, advanced physical and chemical treatment technology (advanced oxidation technology, etc.), pollutant conversion and risk reduction, and water cycling

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Fluorescence, Surface enhanced Raman scattering, Environmental analysis, Microplasitic, Nanoplastic, Nanosensors, Toxicology

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environmental exposure to toxic chemicals, epidemiology, toxicity, ,

Guomao Zheng, Southern University of Science and Technology, Shenzhen, Guangdong, China

human exposure, metabolic toxicity, high-resolution mass spectrometry-based metabolomics

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