DESCRIPTION

*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. 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. Remediation of wastewater and sludge, 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 and quantitative structure toxicity relationship modeling.

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INTRODUCTION

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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. 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. Remediation of wastewater and sludge, 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 and quantitative structure toxicity relationship modeling.

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