

Special Issue

Rare Earth Elements as Emerging Contaminants in Environment: Sources, Fate, Toxicological Effects, and Remediation Strategies

Message from the Guest Editors

The increasing global demand for advanced technologies has led to a significant rise in the mining, production, and application of rare earth elements (REEs). Their release into various ecosystems poses a growing threat to environmental quality and public health. This Special Issue aims to address knowledge gaps by presenting cutting-edge research on the following: (i) advanced analytical techniques for REE detection, speciation, and isotopic fingerprinting; (ii) biogeochemical cycling and fate of REEs in natural and anthropogenically impacted environments; (iii) the ecotoxicological effects and bioaccumulation of REEs in aquatic and terrestrial organisms; (iv) the development of effective remediation technologies such as phytoremediation, bioremediation, and advanced chemical stabilization; and (v) the establishment of robust environmental quality guidelines and risk assessment frameworks. By bringing together interdisciplinary contributions, this Special Issue seeks to provide a holistic understanding of REE contamination and inform sustainable management strategies for mitigating their environmental and health impacts.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

Toxics (ISSN 2305-6304) is an international, peer-reviewed, open access journal which provides an advanced forum for studies related to all aspects of toxic chemicals and materials. We aim to publish high quality work that furthers our understanding of the exposure, effects, and risks of chemicals and materials in humans and the natural environment as well as approaches to assess and/or manage the toxicological and ecotoxicological risks of chemicals and materials. Please consider publishing in *Toxics* when preparing your next paper.

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 17 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2026).