

Special Issue

Biological Removal of Emerging Contaminants: Toxicological Effects and Process Mechanisms

Message from the Guest Editors

Emerging contaminants, as a class of newly identified harmful substances in the environment, pose potential risks to ecosystems and human health due to their complex toxicological impacts. These effects include endocrine disruption, genotoxicity, and bioaccumulation, which can disrupt biological metabolic processes and trigger long-term ecological damage. With the limitations of traditional physical and chemical removal methods such as high-energy consumption and secondary pollution, biological removal technologies have gained increasing attention for their environmental friendliness and cost-effectiveness. Key approaches involve the use of microorganisms, algae, and modified biological materials to degrade or adsorb emerging contaminants through metabolic transformation, biosorption, and other mechanisms. Further research into the toxicological mechanisms of emerging contaminants and optimization of biological removal process parameters are crucial for improving treatment efficiency. This field remains a core research direction in environmental science, with great significance for ecological protection and sustainable development.

Guest Editors

Dr. Yongfu Li

Jiangsu Province Engineering Research Center for Marine Bio-Resources Sustainable Utilization, College of Oceanography, Hohai University, Nanjing 210024, China

Dr. Litao Zhang

CAS Key Laboratory of Experimental Marine Biology, Center for Ocean Mega-Science, Institute of Oceanology, Chinese Academy of Sciences, Qingdao 266071, China

Deadline for manuscript submissions

31 December 2026



Separations

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 6.4



mdpi.com/si/262086

Separations
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
separations@mdpi.com

[mdpi.com/journal/
separations](https://mdpi.com/journal/separations)





Separations

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 6.4



[mdpi.com/journal/
separations](https://mdpi.com/journal/separations)



About the Journal

Message from the Editor-in-Chief

Separations offers the scientific community a high-quality, open-access journal option with rapid time-to-publication without any sacrifice of a rigorous peer-review process. We invite contributions ranging from fundamental characterization and instrumentation development through application of techniques to shed light on a broad spectrum of separation science needs. Since inception, *Separations*, has become unique in its combination of rapid publication and thorough scientific content. We invite you to consider us for your next contribution.

Editor-in-Chief

Prof. Dr. Frank L. Dorman

Department of Chemistry, Dartmouth College, Hanover, NH 03755,
USA

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Chemistry, Analytical) / CiteScore - Q2 (Analytical Chemistry)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.1 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the first half of 2026).