

Special Issue

Marine Toxins: Advances in Their Research and Detection Methodologies

Message from the Guest Editor

Marine biotoxins are naturally occurring harmful compounds, often produced by certain species of microalgae and cyanobacteria, which can form harmful algal blooms. Biotoxins can accumulate in organisms and pose significant risks to marine ecosystems, the seafood industry and human health. Driven by the global seafood trade and expanding bloom events, there is a growing need for sensitive and reliable toxin detection methods.

Recent advances, especially liquid chromatography coupled with mass spectrometry, have greatly improved the detection and quantification of regulated and emerging toxins. Bioassays, biosensors, and novel screening tools complement these techniques, supporting more effective monitoring and risk assessment programs.

This Special Issue invites original research and reviews on analytical method development, toxin occurrence, emerging marine biotoxins, monitoring strategies, toxicology, and detection technologies. By uniting contributions from analytical chemists, toxicologists, marine scientists, and regulatory experts, it seeks to promote interdisciplinary collaboration and encourage further research to enhance seafood safety and public health protection.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Journal of Marine Science and Engineering (JMSE, ISSN: 2077-1312) focuses on research in the fields of Ocean Engineering, Coastal Engineering, Physical Oceanography, Geological Oceanography, Marine Biology, and Marine Environmental Science. It publishes reviews, regular research papers, and short communications, as well as Special Issues on particular subjects. Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the maximum length of the papers.

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