Special Issue

Innovative Adsorption Materials and Extraction Technology for Food Sample Detection

Message from the Guest Editors

This Issue emphasizes the integration of material science, process engineering, and analytical chemistry to optimize the extraction of target compounds—such as allergens, pesticides, or mycotoxins—while minimizing co-extraction of interfering substances. Advanced analytical tools, including high-resolution chromatography, tandem mass spectrometry, and hyphenated spectroscopic techniques, are critical for validating extraction efficiency, ensuring extract purity, and enabling precise quantification of trace-level analytes. Furthermore, computational modeling and machine learning applications in process design will be highlighted to bridge experimental and theoretical advancements. We invite contributions spanning original research, methodological innovations, and comprehensive reviews that explore novel materials, scalable technologies, or interdisciplinary strategies to enhance food safety protocols. Submissions addressing real-world applications, such as rapid on-site detection or industrial-scale implementation, are particularly encouraged.

Guest Editors

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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

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