Special Issue

Two-Dimensional Mass Spectrometry in Natural Extracts and Protein Analysis

Message from the Guest Editors

Two-dimensional mass spectrometry (2D MS) enables tandem mass spectrometry without requiring ion isolation, and 2D MS spectra yield correlations between precursor and fragment ions. The capacity of 2D MS to separate by mass-to-charge ratio and charge state makes it an exciting alternative (or complement) to chromatographic methods.

Today, 2D MS can be applied on FT-ICR mass spectrometers, quadrupole ion traps, and is in development for linear ion traps. The possibility to analyze a complex mixture without the need of a chromatographic separation opens new analytical avenues that are yet to be explored. Already shown to be efficient in fragmentation studies, agrochemical studies, polymer studies, metabolomics, and proteomics, the field of applications for 2D MS is still expanding.

Contributions to this issue, both in the form of original research or review articles, may cover all aspects in two-dimensional mass spectrometry in natural extracts and protein analysis; studies with multidisciplinary input, offering new methodologies or insights, are particularly welcome.

Guest Editors

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As the premier open access journal dedicated to molecular chemistry, now in its 29th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts, and novel materials. Pushing the boundaries of the discipline, we invite papers on all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

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