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Scope of the Journal

The *Journal of the American Society for Mass Spectrometry*, published by the American Chemical Society on behalf of the American Society for Mass Spectrometry, is a monthly, peer-reviewed journal that covers all aspects of mass spectrometry, including fields of scientific inquiry in which mass spectrometry can play a role, including both applications and fundamentals. These fields include the chemical, biological, health, environmental and forensic sciences, omics sciences such as proteomics and metabolomics, as well as physics and geology.

The journal publishes papers on both fundamentals and applications of mass spectrometry, in addition to new instrumentation and methods development.

Papers that report on an application should have as a principal focus the use of a new mass spectrometry tool or approach to solve a qualitative or quantitative problem. Application subjects include, but are not limited to, development or validation of new methodology, proteomics, metabolomics, lipidomics and other 'omics related research, structural elucidation, biopolymer sequencing, automation/implementation of high throughput methods, and environmental and forensic measurements. Papers describing computer applications, new algorithms and software will also be considered.

Fundamental subjects include instrumentation principles, design, and demonstration, structures and chemical properties of gas-phase ions, studies of thermodynamic properties, ion spectroscopy, chemical kinetics, mechanisms of ionization, theories of ion fragmentation, cluster ions, and potential energy surfaces.

In addition to full papers, the journal offers Communications, Notes, Letters, Methods/Protocols, and Perspectives. See [author guidelines](#) for more information on the journal, the full list of manuscript types, and specifics on word count requirements.

Journal of the American Society for Mass Spectrometry will follow standard policies ACS Publications has in place to ensure streamlined and robust practices and a positive author experience (e.g., Ethical Guidelines, Copyright & Permissions, ACS Policy on Theses and Dissertations, etc.).

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Manuscript Types

Article: Fundamental subjects include, but are not restricted to, instrumentation principles, design, and demonstration, structures and chemical properties of gas-phase ions, studies of thermodynamic properties, ion spectroscopy, chemical kinetics, mechanisms of ionization, theories of ion fragmentation, cluster ions, potential energy surfaces, and modeling.

Papers that report on an application should have as a principal focus the use of mass spectrometry to solve a qualitative or quantitative problem. Application subjects include, but are not limited to, structural elucidation, biopolymer sequencing, development or validation of new methodology, proteomics and other 'omics related research, and environmental and forensic measurements. Papers describing development of new software and its applications will be considered, but details and compilations of programs will not be published. A report of a routine application of mass spectrometry is likely to be better suited to a journal specializing in the subject of the application.

Short Communications and Notes: Short Communications are brief descriptions of new and significant research. Purposes include establishing priority in a new area, announcing an important discovery or development, *inter alia*. Communications must contain some experimental or theoretical justification for the ideas being presented. It is usually expected that a Communication will be followed by a full Article. Notes are brief descriptions of technical advances in sample handling, instrumentation, data processing, interpretation of spectra, etc., that will be of interest to some segment of the mass spectrometry community. Short Communications will be published in separate sections at the beginning of each issue. Notes will be published at the end of an issue. Both will, insofar as possible, receive expedited handling. They may contain up to three single-column figures or tables (up to one page, total) and up to 2,300 words, including references and abstract. Space allocated to figures and tables may be replaced by text (~250 words per figure or table). Submissions exceeding these guidelines will be treated as Regular Articles.

Letters to the Editor should be brief and may be edited for conciseness and clarity. Note that Letters to the Editor that comment on research findings previously published in this journal will be forwarded to the original author, who may rebut the Letter to the Editor. If the original authors respond to the Letter to the Editor, both pieces are often scheduled to be published simultaneously. *Journal of the American Society for Mass Spectrometry* will not accept Letters to the Editor that comment on research published elsewhere.

Perspectives: Perspectives summarize a body of research that is reasonably completed such that general conclusions can be drawn. The subject matter is to be of significant interest to the field of mass spectrometry. These articles may either feature the work of a single author or a team of researchers, focus on recent results of a timely subject, or bring perspective to historically important developments. This category may also include articles that describe a research philosophy, identify areas that need emphasis, or represent new directions. Although Perspectives will typically be invited by the editor, proposals may be submitted in advance of preparing the article to eic@jasms.acs.org. The length of Perspectives is to be negotiated with the editor.

Tutorial: Tutorials are articles that provide basic instructions on mass spectrometry and related techniques, with the aim of teaching the reader how to accomplish a specific application. Tutorials are narrower in scope than Reviews or Perspectives but must still cover the relevant background of the topic. Tutorials cover timely topics but do not necessarily present new data. Authors interested in contributing Tutorials are encouraged to reach out to the Editor-in-Chief (eic@jasms.acs.org) for pre-submission feedback.

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- the name(s) of any other author(s);
- a statement of why the paper is appropriate for *Journal of the American Society for Mass Spectrometry*;
- a description of any Supporting Information for Publication and/or for Review Only Material;
- four or more individuals competent to review the manuscript (and their contact information);
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Additionally, authors should note any length issues, whether the manuscript was discussed with an Editor before submission, and other issues important for the review process.

Manuscript Text Components

Title Page: Give the paper as short a title as possible. Submit also a running title of no more than 45 characters (including spaces). List, at the bottom of the page, "Address reprint requests to . . ." followed by the name, exact postal address with zip code, telephone number, and e-mail address of the author to whom communications, proofs, and requests for reprints should be sent.

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In the experimental section of the manuscript, all special safety considerations should be described in sufficient detail so that appropriate safety measures can be taken by those repeating the experiments (see below).

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Spell out, or define in parentheses, all abbreviations, even if they are commonly employed, the first time they are used in the text. Non-standard abbreviations should be used sparingly and must be defined at their first appearance.

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Journal of Pure Applied Chemistry, 1991, 63, 1541-1566). Additional suggestions for definition and style can be found in Standard Definitions of Terms Relating to Mass Spectrometry, by Price, *Journal of the American Society for Mass Spectrometry*, 1991, 2, 336-346 and in Sparkman, O.D., Mass Spec Desk Reference, 2nd Ed., Global View Publishing, Pittsburgh, PA, 2006.

Give all measurements and weights in SI units, using standard abbreviations (see IUPAC Quantities, Units and Symbols in Physical Chemistry). Daltons (Da) or mass units (u) may be used, but amu should not be used.

Consult articles in recent issues of the Journal for the recommended style for headings and subheadings.

Number equations (both chemical and mathematical) consecutively with a single system of Arabic numerals in parentheses placed at the right-hand side of each equation. Add spaces before and after mathematical symbols (e.g., +, -, =) to distinguish some of them from chemical bonds. Number chemical structures consecutively with boldface, Arabic numerals. Designate schemes showing fragmentation pathways, chemical reactions, etc. by consecutive capital Roman numerals (schemes usually do not have titles or captions); the individual pathways within schemes can be distinguished (if necessary) with lower-case letters placed on the arrows.

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1. Doroshenko, V. M., Cotter, R. J.: Ideal Velocity Focusing in a Reflectron Time-of-Flight Mass Spectrometer. *J. Am. Soc. Mass Spectrom.* **10**, 992-999 (1999)
2. Mahler, H. R., Cordes, E. H.: *Biological Chemistry* (2nd ed.). Harper and Row, New York (1971)
3. Anderegg, R. J.: Using Deuterium Exchange and Mass Spectrometry to Study Protein Structure. In: Burlingame, A. L., Carr, S. A. (eds.) *Mass Spectrometry in the Biological Sciences*, p. 85. Humana Press, Totowa, NJ, (1996)

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The [ACS Research Data Policy](#) provides additional information on Data Availability Statements, Data Citation, and Data Repositories.

Data Requirements

The Use of High Resolution Mass Spectral Data for Formula Confirmation: For publication of

exact- mass data that are used to confirm identities of synthetic and natural products, report the uncertainty in the accurate-mass measurement used for formula verification along with the result. The acceptable uncertainty in a measurement by any analytical method must be adequate for the intended use of the data.

Evaluate the uncertainty of accurate mass measurement by any statistically valid method. Determine, for example, the precision and accuracy of replicate measurements or evaluate the performance characteristics of the mass spectrometer (see, for example, Sack, T. M., Lapp, R. L., Gross, M. L., and Kimble, B. J. *Int. J. Mass Spectrom. Ion Proc.* **1984**, *61*, 191-213).

Consider all candidates fitting the experimentally determined value and its reported uncertainty when the result of accurate mass measurement is used for formula confirmation. Do not set fixed acceptable error limits for exact mass measurement. Consider the following when using accurate mass data.

When valence rules and candidate compositions encompassing C0-100, H3-74, O0-4, and N0-4 are considered at nominal parent m/z of 118, there are no candidate formulae within 34 ppm of each other. When the ion is of m/z 750.4 and the formulae are in the range C0-100, H25-110, O0-15, and N0-15, there are 626 candidate formulae that are possible within 5 ppm. Thus, for a measurement at m/z 118, an error of only 34 ppm uniquely defines a particular formula, whereas at m/z 750, an error (and precision) of 0.018 ppm would be required to eliminate all extraneous possibilities.

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Appendix 2: Preparing Graphics

Resolution

Digital graphics pasted into manuscripts should have the following minimum resolutions:

- Black and white line art, 1200 dpi
- Grayscale art, 600 dpi
- Color art, 300 dpi

Size

Graphics must fit a one- or two-column format. Single-column graphics can be sized up to 240 points wide (3.33 in.) and double-column graphics must be sized between 300 and 504 points (4.167 in. and 7 in.). The maximum depth for all graphics is 660 points (9.167 in.) including the caption (allow 12 pts. For each line of caption text). Lettering should be no smaller than 4.5 points in the final published format. The text should be legible when the graphic is viewed full-size. Helvetica or Arial fonts work well for lettering. Lines should be no thinner than 0.5 point.

Color

Color may be used to enhance the clarity of complex structures, figures, spectra, and schemes, etc., and color reproduction of graphics is provided at no additional cost to the author. Graphics intended to appear in black and white or grayscale should not be submitted in color.

Type of Graphics

Table of Contents (TOC)/Abstract Graphic

Consult the Guidelines for [Table of Contents/Abstract Graphics](#) for specifications.

Our team of subject-matter experts and graphical designers can also help generate a compelling TOC graphic to convey your key findings. Learn more about our [Graphical Abstract service](#).

Figures

A caption giving the figure number and a brief description must be included below each figure. The caption should be understandable without reference to the text. It is preferable to place any key to symbols used in the artwork itself, not in the caption. Ensure that any symbols and abbreviations used in the text agree with those in the artwork.

Charts

Charts (groups of structures that do not show reactions) may have a brief caption describing their contents.

Tables

Each table must have a brief (one phrase or sentence) title that describes the contents. The title should be understandable without reference to the text. Details should be put in footnotes, not in the title. Tables should be used when the data cannot be presented clearly in the narrative, when many numbers must be presented, or when more meaningful inter-relationships can be conveyed by the tabular format. Tables should supplement, not duplicate, information presented in the text and figures. Tables should be simple and concise.

Schemes

Each scheme (sequences of reactions) may have a brief caption describing its contents.

Chemical Structures

Chemical structures should be produced with the use of a drawing program such as ChemDraw.

Cover Art

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