

## GUIDLINES FOR MANUSCRIPT PREPARATION

### 1. General

1.1. The journal publishes original, review, and discussion articles on basic nuclear physical properties of radionuclides; chemistry of radioactive elements; methods for isolation, separation, and determination of radioelements; chemical problems of the nuclear fuel cycle; production and isolation of radioactive isotopes; synthesis of radiolabeled compounds; novel applications of radioactive isotopes and isotopically labeled compounds; chemical aspects of nuclear medicine; radiation chemistry; and environmental radiochemistry. Manuscripts on nonradioactive elements are accepted only if they are of interest to those who study radiochemistry and radiochemical technology, e.g., articles on the properties of the main fission products. Manuscripts devoted to the routine use of ionizing radiation and radioactive tracers in chemical research unrelated to radiochemical problems are not accepted.

1.2. The manuscript should report the results of completed research. Serial articles with ordinal numbers and the same common title are not allowed. The maximum recommended length of manuscripts (including tables) typeset in Times New Roman, 12 pt, 1.5 line spacing is 12 pages (+ 6 figures); that of reviews, 30 pages. The inclusion of auxiliary data and details as supplementary materials is encouraged.

1.3. The material should be presented clearly and briefly without repetitions. The authors should choose the most compact and clearest form of data presentation (figures, tables, or description in text); duplication of data in figures, tables, and text is not allowed.

1.4. Manuscripts are submitted in English in electronic form (Microsoft Word or compatible format) at [radkhim@pleiadesonline.com](mailto:radkhim@pleiadesonline.com) together with the copyright transfer agreement (<https://www.pleiades.online/en/authors/agreement/>). The agreement should be signed by all authors. The authors may either fill out the form by hand and subsequently scan it, or fill it out in digital format and with scanned signatures in the appropriate spots. Color scans should be used with signatures done in blue. A separate agreement should be filled out and signed for all supplementary materials.

1.5. Only persons who made a significant contribution to the study may be coauthors. Others who participated in fulfilling particular steps but made no significant contribution may be mentioned in the Acknowledgments. Inclusion in the list of coauthors of persons deceased by the time of manuscript preparation is not allowed. Their active participation in planning the study and obtaining and analyzing experimental data may be mentioned in the Acknowledgments.

1.6. Manuscripts that significantly deviate from the guidelines are returned to the authors without consideration. In that case, the date of the corrected manuscript submission is considered a submission date. The submitted manuscripts are sent to peer reviewers. The manuscript should be corrected according to reviewers' remarks within no more than three months. This period can be extended by the editorial board.

1.7. The galley proofs in PDF format is sent to the corresponding author for checking. Corrections must be made directly in the PDF file as described in the accompanying letter and returned by the indicated date. Otherwise changes will be ignored. If a corresponding author cannot receive galley proofs or in case of changes in the e-mail address, the author(s) should inform the editor in advance and indication alternative e-mail address(es).

## **2. Title page**

2.1. The manuscript should begin with the title, authors, their affiliations, e-mail of the corresponding author, abstract, and keywords. The corresponding author is marked with an asterisk. Authors' affiliations are given using footnote signs (italicized letters). Retired authors indicate their last affiliation. Please indicate only personal e-mail addresses.

2.2. The main results of the study should be formulated in the abstract. The recommended volume of the abstract is 600–1000 characters. The abstract contents should not be limited to general phrases. The abstract should be a single paragraph without references, nonstandard abbreviations, structural formulas, and multilevel mathematical expressions.

## **3. Manuscript structure**

3.1. The manuscript should include the following sections: Introduction, Experimental, Results and Discussion, Conclusion, Acknowledgments (if necessary), Funding (if necessary), Conflict of Interest, and References. For reviews and for theoretical and discussion articles and, in particular cases, also for experimental articles the structure of the manuscript may differ depending on the context. Sections can be broken into subsections. Lengthy manuscripts with multilevel structure, the use of numerical designations for titles of different levels is recommended (e.g., 1, 1.1, 1.1.1 etc.).

3.2. It is recommended to present data that is not essential for understanding the manuscript as supplementary materials. These materials shall not be included in the printed version of the article and shall be available only in the electronic form. Supplementary materials will be available from the publisher's web platform and will not be processed by editors. The supplementary materials files should be named in the order as follows: ESM\_1.mpg, ESM\_2.pdf, ESM\_3.xls, etc. The reference to supplementary materials should be indicated in the text before the list of cited literature.

3.3. *Introduction.* The goals of the study are briefly substantiated and formulated in this cases.

3.4. *Experimental.* Data on chemicals and instruments used in the study, procedures for synthesis, measurements, data processing, etc., are presented.

3.5. *Results and discussion.* The main results of the study and their interpretation are presented. This section may be subdivided into separate Results and Discussion sections.

3.6. *Conclusion.* The outcomes of the study are briefly summarized, and its prospects are discussed. The conclusion should not duplicate the abstract.

3.7. *Acknowledgments*. General information on any assistance in the study and manuscript preparation is presented: information on useful discussions, acknowledgments of colleagues; information on providing materials and data; information on providing shared computers and other equipment; information on performing the studies in centers for shared use; assistance in technical preparation of the manuscript; any other kinds of assistance. Information on financial support of the study is given separately in the next section.

3.8. *Funding*. Information on grants and any other financial support of the study is given. Names of institutes and sponsoring organizations are given here without abbreviations.

3.9. *Conflict of interest*. Possible conflicts of interest of all authors related to the submission must be indicated. If there are no conflicts of interest, the following sentence is given: *The authors declare that they have no conflicts of interest* (or in the singular form, in the case of a single author).

3.10. *References*. The reference numbers are given in square brackets in the text and without them in the list of references. One and only one source should be cited under a given number; the use of literal additions like [1a] is not allowed. The format of references is presented below.

#### **4. Arrangement of references, tables, figures, schemes, and equations**

4.1. References are numbered in the strict correspondence with the order of they are first mentioned in the text. The numbering of references in tables, schemes, and figures (or captions to them) should correspond to the order of the first mentioning of the corresponding object in the text. The reference numbers are given in square brackets. In references to several sources, the range sign should be used where possible, e.g., [1–3] instead of [1, 2, 3].

4.2. Tables, figures, and schemes are numbered in the strict correspondence with the order of their first mentioning in the text. For reviewers' convenience, it is desirable to arrange tables, figures, and schemes in the text as close to the place they are first mentioned as possible. However, when they are large, it is better to arrange them in the end of the manuscript after the list of literature cited. The arrangement principle should be common for all the figures, tables, and schemes.

4.3. All the tables and all the columns in them should have titles. There should be no empty rows or columns in a table. Small tables of simple structure may be arranged in the text directly after their first mention without numbering.

4.4. Figures include plots, schematics of devices and processes, photographs, microscopic images, and other illustrations. All the figures should have captions. The word *figure* in the text and captions is abbreviated as Fig. unless the sentence begins with this word.

4.5. The schemes include chemical or nuclear physical transformations that cannot be adequately reflected by a single line.

4.6. Equations included as separate paragraphs should be numbered by Arabic numerals in parentheses when references to them are given in the text.

## **5. Use of abbreviations, designations, mathematical signs, physical quantities, dimensions, and chemical formulas**

5.1. Standard abbreviations commonly known to the journal's readers can be given without explanation. Other abbreviations must be explained upon first mention in the text.

5.2. Substances mentioned in the manuscript may be numbered with Roman numerals (literal additions are allowed). When the number of compounds is large, the use of Arabic numerals is allowed. These numerals are given in boldface.

5.3. Physical quantities and variables are italicized (vector quantities are given in boldface). Greek letters are never italicized. Subscripts and superscripts are not italicized (e.g.,  $T_1$ ,  $T_{\text{ads}}$ ) unless they themselves are physical quantities or variables (e.g., heat capacity  $C_p$ ). All quantities and their indices should be explained on first mention.

5.4. All quantities should have dimensions. SI units and their derivatives should be used. Other units may be used in the fields where they are used traditionally (e.g., Å in descriptions of molecular structures, barns in descriptions of nuclear reactions, °C and time units like minutes, hours, etc. in description of experiments, etc.). Degrees kelvin (K) are rendered without the degree symbol. In composite dimensions, the use of both a solidus (e.g., 58 J/mol) and dimensions with negative exponents (e.g., 58 J mol<sup>-1</sup>) is allowed. When there are several factors after the solidus, they should be put in parentheses, e.g., 58 J/(mol K). The form of composite dimensions (with solidus or negative exponents) should be consistent throughout the manuscript. In the lists of numerical values and numerical intervals, the dimensions are given only for the last numeral (e.g., 50–58 J/mol), whereas angular degrees are given for each numeral (e.g., angles of 5°–10°). Degrees centigrade are designated as °C (not simply °). Degrees should be done with the assigned symbol, not a superscripted lowercase o. The dimensions of variables are separated by a comma ( $E$ , J/mol), and those of variables under a logarithm, etc., should be in square brackets:  $\ln t$  [min].

5.5. Symbols of chemical elements are formatted in the normal way (except subtitles, in which the whole phrase is in italic or boldface). The atomic number (if necessary) is given as a subscript before the symbol (e.g.,  ${}_{92}\text{U}$ ); the mass number of an isotope, as a superscript before the symbol (e.g.,  ${}^{235}\text{U}$ ) or as a numeral after a hyphen when the element is spelled out (e.g., uranium-235)—notation like U-235 is not allowed; ion charge is given as a superscript after the symbol, with the charge value given first, followed by the charge sign (e.g.,  $\text{U}^{4+}$ ); the valence is given as Roman numerals after the symbol without space (e.g.,  $\text{U(IV)}$ ); in compound formulas (if necessary), it is given after the symbol as superscripted Roman numerals without parentheses (e.g.,  $\text{U}^{\text{IV}}\text{O}_2$ ); the stoichiometric coefficient is given as a subscript after the symbol.

5.6. Periods rather than commas are used as decimal separators. Signs \*, ', ±, individual Greek letters, separate italic or bold letters, separate variables or notation with superscript only or

subscript only, measurement units, numerals in the text, and simple mathematical or chemical formulas (e.g.,  $a^2 + b^2 = c^2$ ; H<sub>2</sub>SO<sub>4</sub>) should be typed as simple text without using embedded frames (without using Equation, MathType, etc.). The signs of mathematical operations and relationships are separated by spaces (e.g.,  $3 \pm 1$ ). In superscripts and subscripts, the signs of mathematical operations and relationships are given without spaces (e.g., UO<sub>2+x</sub>). To avoid confusion, if there are several factors in the denominator after the slash, they should be put in parentheses (e.g.,  $\Delta H/(RT)$ ). Be careful when using designations like  $k \times 10^3$  in figures and tables: the designation  $k \times 10^3, \text{ s}^{-1}$  implies that  $k$  has the order of  $10^{-3} \text{ s}^{-1}$ .

5.7. Use IUPAC nomenclature or commonly accepted trivial names for chemical compounds. When using trivial names for compounds that are not commonly known to journal's readers, the IUPAC name and/or structural formula should also be given.

5.8. Do not present structural formulas of commonly known compounds and commonly known mathematical formulas used for routine calculations.

## **6. Presentation of figures, schemes, structural formulas, and multilevel equations**

6.1. It is desirable to present figures and schemes in the editable (vector) format. For bitmap images, the resolution should be no less than 600 dpi for black-and-white images and 300 dpi for grayscale and color images (photographs, microscopic images). It is recommended that mutually related plots be combined in one image. When using different ordinate or abscissa axes for different curves, an arrow should be drawn from the curve toward the ordinate or abscissa axes to which this curve corresponds.

6.2. The dimensions of physical quantities should be indicated in each figure. It is recommended that curves or items in a figure be numbered with italic Arabic numerals, with a legend given in the caption.

6.3. Structural formulas should be prepared in the ChemDraw program. Do not construct structural formulas by combining text elements, autoshapes, and embedded frames.

6.4. Equations that cannot be adequately created in text mode should be created with an equation editor (preferably MathType). Do not construct formulas from several parts in the form of tables, text elements, or embedded frames. For MathType formulas, the default font settings should be used. Do not change them manually for individual symbols or elements of formulas.

## **7. Presentation of references**

7.1. Initials are put after the authors' surnames and are not separated from each other by a space, e.g., Jones, J.J. The complete list of authors is given irrespective of their number, without truncation by *et al.*

7.2. *References to journal articles:* The titles of articles are not given. The references are given in the following order: authors, journal name (use standard abbreviations), year, volume

(abbreviation: Vol.), issue number (no.), and first page (or article code in the issue). Presentation of the DOI index is desirable.

Example:

1. Jones, J.J. and Smith, S.S., *J. Am. Chem. Soc.*, 1996, vol. 118, no. 1, p. 10.

7.3. *References to articles from collections of articles*: The title is not given. The references are given in the following order: authors, collection name, editors (if available), city, publisher, year, and first page. The following abbreviations are allowed in references to conference proceedings: Int., Conf., Meet., Symp., Congr., Coll. No abbreviations are allowed in conference names. The place and time of the conference are indicated. In references to articles from collections of articles without editors indicated (except for conference proceedings or abstracts), the collection name should be preceded by *in*. *References to books* are given similarly. For books that had several editions, the number of edition is indicated after the year. References to different pages from the same book are given under the same number, with the page number indicated in the text (e.g., [2, p. 100]). In references to books published in Russian or other Cyrillic languages, the book title should be given in transliteration and then (in parentheses) in English translation.

Examples:

*Conference article*: 1. Jones, J.J., Abstracts of Papers, *Int. Conf. on Radiochemistry*, New York, 2000, p. 35.

*Article from a collection with an editor*: 2. Jones, J.J., *Uranium Chemistry*, Smith, S.S., Ed., New York: Wiley, 2000, p. 100.

*Article from a collection without an editor*: 3. Jones, J.J., in *Uranium Chemistry*, New York: Wiley, 2000, p. 100.

*Monograph*: 4. Jones, J.J., *Uranium Chemistry*, New York: Wiley, 2000, 3rd ed.

*Monograph in Russian*: 5. Ivanov, I.I., *Khimiya urana* (Uranium Chemistry), Moscow: Nauka, 2000.

7.4. *References to dissertations* are given in the following order: author's surname and initials, source title, source kind (e.g.: PhD Thesis, Cand. Sci. (Chem.) Dissertation), city, institute in which the dissertation was defended, year, and pages (if necessary). *References to patents* are given in the following order: authors' surnames and initials, patent number (use standard country codes or WO, EP codes), and year. The patent title is not given. *References to preprints and reports* are given in the following order: authors' surnames and initials, source title, city, institute or publishing house, source code, and pages (if necessary). *References to electronic resources* are given in the following order: authors' surnames and initials, source title, URL, access date.

7.5. References to unpublished documents and private communications should be avoided. If a cited article was in press by the date of manuscript submission, the authors should inform the editorial office as soon as they get information on the volume, issue, and pages or, at least, indicate these data in the proofreading step.