

## Instructions for authors

### Publication policy

Advances in Polar Science (APS) is an international, peer-reviewed journal jointly sponsored by the Polar Research Institute of China and the Chinese Society for Oceanography, published quarterly by China Science Press, for the whole Antarctic and Arctic science community. Original papers are accepted from scientists of any nation, subject to peer review by at least two expert referees. Papers must present scientific results or interpretations that are new and have not been published elsewhere.

Submissions may relate to any field including polar glaciology, polar oceanography, polar atmospheric science, polar space physics, polar geology, polar geophysics, polar geochemistry, polar biology and ecology, polar medicine, Antarctic astronomy, polar environment observation, polar engineering as well as polar information service and management. Authors should state, when submitting, if the paper has originally been submitted elsewhere. Failure to do this may result in immediate rejection.

Authors should ensure that papers conform as closely as possible to the format set out here to facilitate publication as speedily as possible.

Papers should focus on the polar regions. Papers making comparisons with other regions will also be acceptable.

APS is published in only in English. The Editors particularly welcome papers with a multidisciplinary approach. There are no page charges.

APS publishes (1) **Reviews**: Summarizes representative results and achievements in a particular topic or an area, comments on the current situation, and advice on research directions. Author opinions and related discussions are invited; (2) **Opinion Editorial**: Provides a forum for comment on the status and/or deficiencies on any aspect of polar science, reflects on recent innovation or progress, promotes internationally collaborative polar science projects, etc; (3) **Articles**: Reports important original results in all areas of polar science; (4) **Letters**: Briefly presents novel and innovative findings related to polar science; (5) **Trends**: Reports important scientific news, information, and academic affairs, as well as major international programs or conferences in all areas of polar science.

An entire issue of the journal may be devoted to publishing the proceedings of an Antarctic or Arctic meeting, the special research theme for an Antarctic or Arctic cruises, or the research outcome of a polar scientific program. Organizers or leaders interested in this should contact the Editors immediately after the meeting, the cruise or the program is finalized. No cost of publication will be required and all papers will be subject to normal refereeing and editing.

The Editors assume that those authors who publish in the journal will be happy to review submissions in their own field.

### Online Submission

**Authors should submit their manuscripts online via the website:**

**<http://mc03.manuscriptcentral.com/apsci>.**

Electronic submission substantially reduces the editorial processing and reviewing times and shortens overall publication times. Please click on the 'Author Center' link in the top left hand of the screen in <http://mc03.manuscriptcentral.com/apsci> and upload all of your manuscript files following the

instructions given on the screen.

#### • General

The outline is as follows:

- 1) Submit a full electronic copy (the text, all tables, all figures, etc.) of the manuscript. The Editorial Board accepts most word processing formats, but Word is preferred.
- 2) All manuscripts must be written in American English.
- 3) The manuscript should be assembled in the order: *title, abstract, text, acknowledgments, references, appendices, tables and figures' captions and figures.*

#### • Title Page

The title page should include:

- 1) The name(s) of the author(s)
- 2) A concise and informative title contains not more than 80 *characters* and the running title should also be given in 50 *characters*.
- 3) The affiliation(s) and address(es) of the author(s)
- 4) The e-mail address, telephone and fax numbers of the corresponding author

#### • Abstract

Please provide an abstract of not more than 250 words.

#### • Keywords

Please provide 3 to 8 keywords which can be used for indexing purposes.

#### •Text Formatting

- 1) The text should be in single-column format and double spacing. A font size of 12-point Times New Roman is required. Please insert line numbers, and one page is recommended to be around 30 lines. Use the automatic page numbering function to number the pages.
- 2) Use the International System of Units (SI), and their standard abbreviations, for all measurements of physical quantities. Follow these examples for specific applications:  $\mu\text{mol m}^{-2} \text{d}^{-1}$ , ind 1000  $\text{m}^{-3}$ , 58%–71%,  $-0.5^{\circ}\text{C}$  –  $-0.2^{\circ}\text{C}$ .
- 3) Use italics for emphasis and Latin words, e.g., genus and species names.
- 4) Please always use internationally accepted signs and symbols for units, preferably SI units (for a transition period, and as an exception to this general rule, commonly used scientific units not included in the International System of Units may be used).
- 5) All dates included in the manuscript need to be in the style Day Month Year, for example, 17 December 2011.
- 6) The new used name must be approved by the Authorized Society, for example, new meteorite names by the Meteorite Nomenclature Committee of the Meteoritical Society and new place names by the Antarctic Place Names Committee.
- 7) Use the table function, not spreadsheets, to make tables.
- 8) Use the equation editor or MathType for equations.
- 9) Save your file in doc format (Word 2003 or older Word versions).

## • Headings

Please use no more than three levels of displayed headings.

## • Abbreviations

Abbreviations should be defined at first mention in abstract and text respectively and used consistently thereafter.

## • Acknowledgments

Acknowledgments of people, grants, grants numbers, funds, etc. should be placed in a separate section before the reference list. The names of funding organizations should be written in full.

## • References

### Citation Style

References should be cited in text using the author name and date with references listed alphabetically. Some examples:

A significant discovery in the 1974–1975 season was the extensive and practically continuous body of water—a subice lake—beneath and to the NNW of Vostok Station (Robin et al. 1977). It was possible to indicated approximate dimensions and to speculate on its origin. Lake Vostok became the focus of later and more intensive airborne, satellite and ground based Investigations (Ridley et al. 1993; Kapitsa et al. 1996; Ridley et al. 2003a). Ridley et al. (1993) have recently shown ....

Kapitsa A P, Ridley J K, Robin G D Q, et al. 1996. A large deep freshwater lake beneath the ice of central East Antarctica. *Nature*, 381(6584): 684-686

Ridley J K, Cudlip W, Laxon S W. 1993. Identification of subglacial lakes using ERS-1 radar altimeter. *J Glaciol*, 39(133): 625-634

Ridley J K, Cudlip W, Laxon S W. 2003a. Identification of subglacial lakes using ERS-1 radar altimeter. *J Glaciol*, 39(133): 625-634

Ridley J K, Cudlip W, Laxon S W. 2003b. Identification of subglacial lakes using ERS-1 radar altimeter. *J Glaciol*, 39(133): 625-634

Robin G D Q, Drewry D J, Meldrum D T. 1977. International studies of ice sheet and bedrock. *Philosoph Trans Royal Soc B*, 1977, 279(963):185-196

### Reference list

The list of references should only include works that are cited in the text and that have been published or accepted for publication. References should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters 'a', 'b', 'c', etc., placed after the year of publication. The initials of **all the family names of the authors should be capitalized**.

### Reference style

*Text:* All citations in the text should refer to:

1. *Single author:* the author's name (without initials, unless there is ambiguity) and the year of publication;
2. *Two authors:* both authors' names and the year of publication;

3. *Three or more authors*: first author's name followed by 'et al.' and the year of publication.

Citations may be made directly (or parenthetically). Groups of references should be listed first alphabetically, then chronologically.

Examples: 'as demonstrated (Allan, 2000a, 2000b, 1999; Allan and Jones, 1999). Kramer et al. (2010) have recently shown ....'

*List*: References should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters 'a', 'b', 'c', etc., placed after the year of publication.

Note:

Ideally, the names and initials of not more than three authors (or editors, if more than three authors, only list the first three authors, plus “, et al.”) should be provided. The author’s initials follow his or her last name. A publication date must be given for each reference. For an in press article, use the current year as the date.

DOI. The Digital Object Identifier (DOI) is a system for identifying and exchanging intellectual property in the digital environment. The DOI is a required part of the citation for APS articles starting in 2011. When they are known, DOIs should be included for non-APS publications.

The following are examples of the most commonly cited reference types.

- a) Journal article. Authors, article title, publication date, journal, volume and pages/citation number must be included.

Hosie G W, Kirkwood J. 1986. Euphausiid larvae collected from the Prydz Bay region during the Nella Dan cruise (SIBEX I). *Mem Natl Inst Polar Res*, 40: 110-116.

Siegel V. 2000. Krill (Euphausiacea) demography and variability in abundance and distribution. *Can J Fish Aquat Sci*, 57: 151-167.

Witek Z, Kalinowski J, Grelowski A, et al. 1981. Studies of aggregations of krill (*Euphausia superba*). *Meeresforsch*, 28: 228-243.

- b) Article by DOI.

WANG X Y, ZHAO J P. 2012. Seasonal and inter-annual variations of the primary types of the Arctic sea-ice drifting patterns. *Adv Polar Sci*, 23: 72-81, doi: 10.3724/SPJ.1085.2012.00072.

WINTON M. 2006. Amplified climate change: what does surface albedo feedback have to do with it. *Geophysical Research Letters*, 33 (L03701), doi:10.1029/2005GL025244.

- c) Book. Authors, book title, publisher’s location, publisher, and publication date must be included. To cite an entire edited volume, use the editors as the authors, as shown below. Include book series and volume number when applicable.

Pakhomov E A. 1991. Antarctic macroplankton and the nutrition of coastal fishes. Moscow: Russian Academy of Sciences.

Sun L G, Xie Z Q, Liu X D, et al. 2006. Ecological geology on Ice-free Antarctica. Beijing: Science Press.

Klotz S, Johnson N L (Eds.). 1983. *Encyclopedia of Statistical Sciences*, N. J.: John Wiley, Hoboken.

Tape W. 1994. *Atmospheric Halos*, Antarctic Res. Ser., vol. 64, Washington, D. C.: AGU.

- d) Book chapter. Authors, chapter title, book title (preceded by “//”), publisher’s location, publisher, publication date, and chapter pages must be included. Include editors and book series and volume number when applicable.

Brown B, Aaron M. 2001. *The politics of nature*//Smith J. *The rise of modern genomics*, 3rd edn. New York: Wiley, 230-257.

- e) Online document. Authors, document title, website address, and publication date must be included.

Hanneman R. 2011. Introduction to social network methods. <http://www.faculty.ucr.edu/~hanneman/>.

- f) Dissertation. Authors, thesis title, thesis designator (including degree), institution's location, institution, and publication date must be included.

Trent J W. 1975. Experimental acute renal failure. M.S. thesis, Oakland, California: University of California.

- g) Conference paper. Authors, title of paper presented, location of meeting, name of meeting (preceded by “//”), meeting sponsor, and meeting date are required. Conference proceedings published as books or in journals should be formatted as those types. When possible, avoid citing conference papers older than 2 years; instead, cite published book or journal articles that resulted from the research presented at the conference.

Khain A, Pokrovsky A, Blahak U Et Al. 2008. Is the dependence of warm and ice precipitation on the aerosol concentration monotonic?//Cancun, Mexico: 15th International Conference on Clouds and Precipitation, Int. Comm. on Clouds and Precip.

#### • Tables

- 1) All tables are to be numbered using Arabic numerals.
- 2) Tables should always be cited in text in consecutive numerical order.
- 3) For each table, please supply a table caption (title) explaining the components of the table.
- 4) Column heads. All columns (except the first one) must have headings. Their relation to the data is clear and they refer to column below.
- 5) Each entry in a table should appear in a new cell; avoid tables created with the tab key and embedded objects. Tables must be editable and must not be embedded as pictures.
- 6) Identify any previously published material by giving the original source in the form of a reference at the end of the table caption.
- 7) Footnotes to tables should be indicated by superscript lower-case letters (or asterisks for significance values and other statistical data) and included beneath the table body.

**Table 1** Compositions of olivine and pyroxene in GRV 024237, analyzed by EMPA

Element	Olivine(average)/(wt%)					Pigeonite(average)/(wt%
	No.1	No.2	No.3	No.4	No.5	
<b>SiO<sub>2</sub></b>	40.4±0.5	40.3±0.2	40.5±0.7	40.4±0.5	40.1±0.6	54.8±0.5
<b>TiO<sub>2</sub></b>	bdl.	bdl.	bdl.	bdl.	bdl.	0.080
<b>Al<sub>2</sub>O<sub>3</sub></b>	≤0.06	≤0.03	≤0.04	≤0.03	≤0.04	0.65±0.01
<b>Cr<sub>2</sub>O<sub>3</sub></b>	0.65±0.07	0.70±0.06	0.62±0.07	0.65±0.05	0.71±0.08	1.07±0.07
<b>FeO</b>	12.33±3	10.04±2	10.65±3	11.46±3	12.29±3	9.7±0.4
<b>MnO</b>	0.43±0.04	0.49±0.03	0.44±0.04	0.47±0.04	0.45±0.05	0.40±0.05
<b>MgO</b>	45.93±2	47.36 ±1	47.19 ±3	46.42 ±3	45.92 ±2	27.7±0.2

<b>CaO</b>	0.31±0.06	0.36±0.05	0.33±0.06	0.33±0.06	0.36±0.02	4.51±0.08
<b>Na<sub>2</sub>O</b>	≤0.06	≤0.04	≤0.07	≤0.04	≤0.05	0.09
<b>K<sub>2</sub>O</b>	bdl.	≤0.04	≤0.03	≤0.03	≤0.04	bdl.
<b>NiO</b>	≤0.04	≤0.04	≤0.06	≤0.03	≤0.04	0.06
<b>Total</b>	100.10	99.31	99.87	99.80	99.89	99.10
<b>Fa/Fs</b>	7.8-16.0	8.2-12.9	6.2-14.9	6.4-16.5	9.3-16.8	14.9±0.5

Notes: Five olivine grains (No. 1-5) were analyzed.

### • Artwork and Illustrations Guidelines

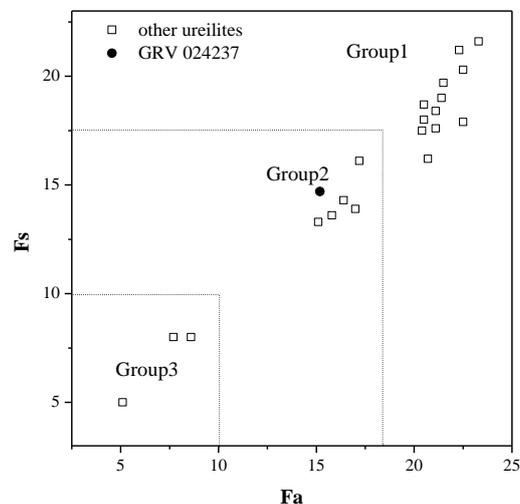
For the best quality final product, it is highly recommended that you submit all of your artwork – photographs, line drawings, etc. – in an electronic format. Your art will then be produced to the highest standards with the greatest accuracy to detail. The published work will directly reflect the quality of the artwork provided.

#### Electronic Figure Submission

- 1) Supply all figures electronically.
- 2) Indicate what graphics program was used to create the artwork.
- 3) For vector graphics, the preferred format is EPS; for halftones, please use TIFF format. MS Office files are also acceptable.
- 4) Vector graphics containing fonts must have the fonts embedded in the files.
- 5) Name your figure files with "Figure" and the figure number, e.g., Figure 1.eps.

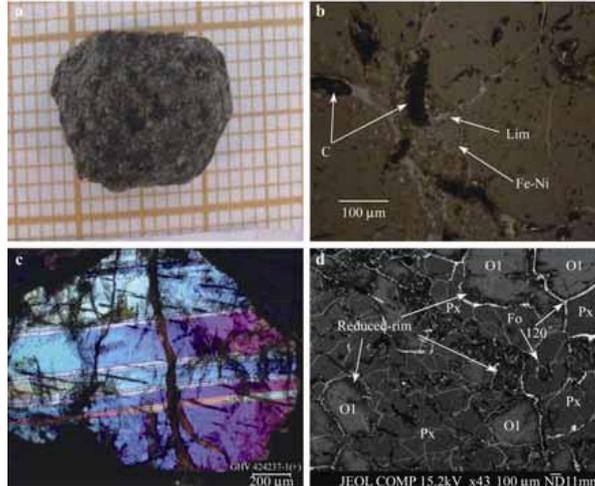
#### Line Art

- 1) Definition: Black and white graphic with no shading.
- 2) Do not use faint lines and/or lettering and check that all lines and lettering within the figures are legible at final size.
- 3) All lines should be at least 0.1 mm (0.3 pt) wide.
- 4) Scanned line drawings and line drawings in bitmap format should have a minimum resolution of 1200 dpi.
- 5) Vector graphics containing fonts must have the fonts embedded in the files.



### Halftone Art

- 1) Definition: Photographs, drawings, or paintings with fine shading, etc.
- 2) If any magnification is used in the photographs, indicate this by using scale bars within the figures themselves.
- 3) Halftones should have a minimum resolution of 300 dpi.



### Color Art

- 1) Color art is free of charge for online publication.
- 2) If black and white will be shown in the print version, make sure that the main information will still be visible. Many colors are not distinguishable from one another when converted to black and white. A simple way to check this is to make a xerographic copy to see if the necessary distinctions between the different colors are still apparent.
- 3) If the figures will be printed in black and white, do not refer to color in the captions.
- 4) Color illustrations should be submitted as RGB (8 bits per channel).

### Figure Lettering

- 1) Keep lettering consistently sized throughout your final-sized artwork, usually about 2–3 mm (8–20 pt).
- 2) Variance of type size within an illustration should be minimal, e.g., do not use 8-pt type on an axis and 20-pt type for the axis label.
- 3) Avoid effects such as shading, outline letters, etc.
- 4) Do not include titles or captions within your illustrations.

### Figure Numbering

- 1) All figures are to be numbered using Arabic numerals.
- 2) Figures should always be cited in text in consecutive numerical order.
- 3) Figure parts should be denoted by lowercase letters (a, b, c, etc.) in bold type.
- 4) If an appendix appears in your article and it contains one or more figures, number the appendix figures, “A1, A2, A3, etc.”.

### Figure Captions

- 1) Each figure should have a concise caption describing accurately what the figure depicts. Include the captions in the text file of the manuscript, not in the figure file.
- 2) Figure captions begin with the term “Figure” in bold type, followed by the figure number, also in bold type.

- 3) No punctuation is to be included after the number, and period is placed at the end of the caption.
- 4) Identify all elements found in the figure in the figure caption; and use boxes, circles, etc., as coordinate points in graphs.
- 5) Identify previously published material by giving the original source in the form of a reference citation at the end of the figure caption.

### Permissions

If you include figures that have already been published elsewhere, you must obtain permission from the copyright owner(s) for both the print and online format. Please be aware that some publishers do not grant electronic rights for free and that Springer will not be able to refund any costs that may have occurred to receive these permissions. In such cases, material from other sources should be used.

### Accessibility

In order to give people of all abilities and disabilities access to the content of your figures, please make sure that:

- 1) All figures have descriptive captions (blind users could then use a text-to-speech software or a text-to-Braille hardware)
- 2) Patterns are used instead of or in addition to colors for conveying information (color-blind users would then be able to distinguish the visual elements)
- 3) Any figure lettering has a contrast ratio of at least 4.5:1

### • After acceptance

Upon acceptance of your article you will receive a link to sign the [Copyright Transfer Statement](#) online and indicate whether you wish to order OpenChoice, offprints, or printing of figures in color. Once the Author Query Application has been completed, your article will be processed and you will receive the proofs.

### Online First

The article will be published online after receipt of the corrected proofs. This is the official first publication citable with the DOI. After release of the printed version, the paper can also be cited by issue and page numbers.

### Manuscript Submission

When choosing APS for their submission, authors should consult the APS scopes included at the beginning of this guide and consult its recent issue.

### Submission

APS uses a completely electronic manuscript submission and peer review system: [the ScholarOne Manuscripts](#) (<http://mc03.manuscriptcentral.com/apsci>). All steps in the review process are performed and monitored from ScholarOne Manuscripts. The system accepts a wide range of file formats and automatically generates a composite PDF file for editors and reviewers. In addition, ScholarOne Manuscripts allows you to check the status of your manuscript online throughout the review process. The ScholarOne Manuscripts submission process is relatively simple and quick if you have the necessary information and materials assembled in advance. Make sure to review the ScholarOne Manuscripts submission guidelines and requirements before you begin your first online submission; User help is available both online and through the journal Editor's office

## **Review**

Authors are asked to provide the names and contact information of three experts in their area as possible reviewers. To avoid a conflict of interest, do not list colleagues who are close associates, collaborators, or family members.

The decision to accept a manuscript for publication is made by the journal editor solely on the basis of suitability of subject matter to the focus of the journal, originality of the contribution, and scientific merit. The Editor has complete responsibility and authority to accept or reject a submitted article for publication. The Editor may confer with Associate Editors and reviewers in making this decision. Once the Editor has made a decision on a manuscript, the decision and accompanying reviews are sent via e-mail to the author.

The manuscripts for “Opinion Editorial” will be directly reviewed by EICs with final decision without peer review by expert referrers.

## **Manuscript Decision**

You will receive word of the Editor’s decision on your manuscript via e-mail. If your submission is accepted, this e-mail will contain a series of instructions and links on what to do next to initiate the production process.

You will need to decide on color figure options, complete important forms (e.g., copyright transfer), and provide APS staff with final electronic files in designated formats. It is important to note that the official acceptance date of your manuscript is assigned only when you have provided all final, workable electronic files. APS staff graphics experts and copy editors will contact you to resolve any technical questions on your files.

## **Final Files**

Text and table files must be supplied in Microsoft Word, WordPerfect, or LaTeX; PDF text files cannot be used for the production process. Figures and multimedia can be submitted in a variety of formats; consult the list of Acceptable File Formats. Authors who are unable to provide electronic files for text and/or figures should contact the journal editor’s assistant. Once the Editor’s Assistant has received all your files and essential accompanying information, your manuscript will begin the production process.

## **Publications Fees**

Publication fees in APS is free of charge thanks to generous funding from the Polar Research Institute of China.

## **Article Preparation and Proofing**

### **Article Preparation**

Once all final files and missing information are provided, APS graphics experts will evaluate and size your figures. If any of your figures do not meet technical specifications, you will be contacted and asked to provide revised figures.

Copyediting begins after figures are finalized. Manuscripts are copyedited in the order in which they are accepted for publication, with the exception of rapid publication types, such as correction articles. Copy editors edit the electronic text file, including tables, in the format in which you provide it and make sure that figures match their captions and the text. In addition, copy editors create the critical

“metadata” for your article that allows it to be fully linked, searched, and accessed online.

Copy editors will contact you via e-mail to resolve any questions or discrepancies. This reduces the number of changes needed at article proof stage and gives you a chance to make minor last-minute corrections. After queries are answered, copy editors revise the files and send text and figure files to a commercial firm for processing into the three outputs required for electronic publishing: the master source file (XML), the Web version (HTML), and a printer-friendly version (one PDF for the Web and one for the print issue, where applicable).

### **Article Proofs**

When the proofs are ready, the corresponding author will be contacted via e-mail and asked to proofread the PDF version through a secure Web site. Articles are not fully proofed by staff, so authors are asked to be thorough in their reviews of the HTML version, paying particular attention to mathematics, tables, and graphics. The proof is not a draft; authors should submit only serious corrections that affect the interpretation of the article or correct the data and avoid simple rewording and rephrasing. A list of corrections should be returned via e-mail, and staff will incorporate them into the article files according to APS style. If figure revisions are requested or new figures supplied during this proofing process, the staff will process them and post them for the corresponding author to review. Extensive or significant changes to the article are subject to Editorial review.

The corrected files are again sent to the commercial firm for reprocessing into final files for the archive, Web, and print. Staff carefully check to make sure that all corrections have been made, that HTML links work, and that the article is properly posted on the journal Web site. The article is now officially published.

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APS is accessible via the journal’s website at <http://www.aps-polar.org>

### **Most Frequently Made Changes**

The following checklist covers the changes made most frequently to APS manuscripts. Following this checklist will help speed the processing of your manuscript.

- List all authors on title page and provide complete addresses for all authors
- Use American spellings rather than British spellings
- Incorporate footnoted information into text (footnotes are used only for affiliations and auxiliary material)
- Define abbreviations/acronyms at first use
- Change dates to international date format: 25 January 2003 (in tables, months may be abbreviated)
- Change bulleted lists to numbered lists
- Add space between numeral and unit of measure; do not use a dot
- Number text equations consecutively throughout; do not number by section, except appendix equations, which must be numbered separately from main text equations

- Provide equations that are editable, not formatted as pictures
- Format reference citations to APS style: use author name and date with references listed alphabetically
- Provide complete information for each reference, as outlined above
- Cite all references in the text and provide a reference for each unique text citation
- Provide tables that are editable, not formatted as pictures (note that tables may be submitted in Excel)
- Include at least two points of latitude and longitude on figures containing maps