

# Guidelines for Authors of *Semiconductors*

## GENERAL

1. Articles devoted to the following fields in the physics and technology of semiconductors are published in the journal:

- Atomic Structure and Nonelectronic Properties of Semiconductors;
- Electronic and Optical Properties of Semiconductors;
- Semiconductor Structures, Interfaces, and Surfaces;
- Low-Dimensional Systems;
- Amorphous, Vitreous, Porous, Organic, and Microcrystalline Semiconductors; Semiconductor Composites;
- Physics of Semiconductor Devices;
- Fabrication, Treatment, and Testing of Materials and Structures.

2. The manuscript should be submitted by e-mail. The following formatting of the text is recommended: Times New Roman font (14 pt), 1.5 line spacing. The margins should be as follows: 3 cm left; 2.5 cm top and bottom; 2 cm right; the text should be justified. The use of other fonts with a point size of 12–14 points is allowed.

The manuscript should include the title page, text, and separate pages with the abstract, references, tables, figure captions, and figures themselves. The total length of the manuscript should not exceed 20 pages (not including the figures). The number of figures in the manuscript should not be greater than six, including figures with letter designations (for example, Fig. 1a and Fig. 1b are considered two figures).

Together with the manuscript, the authors should submit a scanned copy of the [copyright transfer agreement](#) completed and signed by all authors.

3. The manuscript must be within subject matter of the journal. Scientific findings should be clearly stated, and conclusions should be substantiated. All the content of the manuscript must be presented clearly. It is advisable to specify the intended audience of the manuscript.

## STYLE

1. The style of the paper should be clear, informative, and concise. Avoid long sentences. Bear in mind that clarity of presentation has the highest priority. Avoid the introduction of “homemade” new terminology and jargon. Do not use abbreviations to excess. All abbreviations should be written out fully upon first mention, even such widely used abbreviations as  $I$ – $V$  (current–voltage) characteristic, IR (infrared), and QW (quantum well).

2. The pages of the text should be numbered. To facilitate readability, it is recommended to divide the text into sections and divide large sections into subsections (e.g., 1. INTRODUCTION, 2. EXPERIMENTAL, 3. RESULTS (3.1. *Photoluminescence*, 3.2. *Infrared Spectra*, etc.).

3. In the INTRODUCTION, the worldwide level of studies in the field under consideration should be assessed, unsolved problems in this field should be stated, and the main objective of the study should be clearly formulated. In describing the experimental technique, the details of well-known methods should be omitted by referring to available previous publications; however, it is necessary to emphasize the main distinctive features of measurements. As a rule, the data are illustrated by figures and are listed in tables.

Avoid duplication of information, do not repeat in the text the contents of tables or figure captions. In the CONCLUSIONS, state the main new results and direct the reader’s attention to the changes and additions that this study introduces into the global state of the problem or issue under consideration.

4. References to previous publications are given in the order as they are mentioned in the text and according to the numbers as they are listed in the REFERENCES; these references are given in square

brackets: [1–5], [3, 4–7], or [8]. The footnotes should be numbered continuously, and each footnote should be printed on the page to which it refers. Notes to tables should be formatted typically as follows – Note: The data were obtained ... or  $*x = 0.1$ .

### FORMAT

The title page should have a top margin of 5–6 cm, the title, the list of all authors (initials and surnames), and their affiliations (without abbreviations). The e-mail address of the corresponding author should be given below on a separate line.

The abstract is an important introductory part of the paper and is a stand-alone document; it should not contain abbreviations and references to other publications. The abstract should be informative. The abstract should be written in Roman type with the same size and line spacing as the main text.

References. Use a number in brackets when citing references in text. The names journals should be in the standard *CASSI*-abbreviated form. Please do not refer to publications that are not readily available to the average reader. The list of references is formatted as in examples below:

### REFERENCES

1. N. A. Poklonski, V. F. Stelmakh, V. D. Tkachev, and S. V. Voitkov, *Phys. Status Solidi B* **88**, K165 (1978).
2. H. A. Bethe and E. Salpeter, *Quantum Mechanics of One- and Two-Electron Atoms* (Academic, New York).
3. B. I. Shklovskii and A. L. Éfros, *Electronic Properties of Doped Semiconductors* (Springer, Berlin, 1984).
4. Yu. A. Goldberg, in *Handbook Series on Semiconductor Parameters*, Ed. by M. Levinshtein, S. Rumyantsev, and M. Shur (World Scientific, London, 1999), Vol. 2, p. 1.
5. *Handbook of Mathematical Functions*, Ed. by M. Abramovitz and I. A. Stegun (Dover, New York, 1971).
6. H. J. Krenner, A. Zrenner, and G. Abstreiter, in *Abstracts of 26th International Conference on Physics of Semiconductors* (Edinburgh, 2002), Part 1, p. 204.
7. K. W. Stone, N. S. Fatemi, L. M. Garverick, et al., in *Proceedings of 25th IEEE Photovoltaic Specialists Conference, Washington, 1996* (IEEE, New York, 1996), p. 1421.

In figure captions, it is not allowed to use special graphic symbols (circles, triangles, and so on); these symbols should be numbered in the figure itself. Correct listing of the curve parameters is clear from these examples:  $V = (1) 0.1, (2) 0.3, \text{ and } (3) 0.5 \text{ V}$ ;  $N_a = (1) 5 \times 10^{16}, (2) 1.2 \times 10^{17}, \text{ and } (3) 1.8 \times 10^{18} \text{ cm}^{-3}$ .

### FORMULAS, SYMBOLS, AND EQUATIONS

1. Only Latin and Greek letters are used as designations of physical, mathematical, and chemical quantities. Different quantities should not be designated using the same letter (for example,  $n$  is the charge-carrier concentration, the refractive index, and just an integer;  $x$  is the fraction of a chemical element in an alloy  $\text{In}_x\text{Ga}_{1-x}\text{As}$  and the geometric coordinate). If there are a large number of quantities, lowercase letters, Gothic font, and superscripts and subscripts can be used, in addition to conventional designations.

It is desirable to choose letters, abbreviations, or numbers that are easily understandable in the context of English semantics:  $V_{\text{in}}$  and  $V_{\text{out}}$  for input and output voltages;  $V_{\text{oc}}$  for open-circuit voltage,  $I_{\text{sc}}$  for short-circuit current, and  $N_0$  for the initial value of some quantity.

Italic is used to designate physical quantities and variables. Abbreviations is superscripts and subscripts should not be italicized:  $k_{\text{B}}$  (Boltzmann constant),  $E_{\text{F}}$  (Fermi energy), and  $T_{\text{C}}$  (Curie temperature).

2. Proportionality is indicated by the symbol  $\propto$ , for example,  $I \propto V_{\text{m}}$ . The fact that a quantity is approximately equal to some value is represented either as, for example,  $\sim 30 \text{ mV}$  or as  $V \approx 30 \text{ mV}$ . The ranges of the values are written correctly as, for example,  $t = 10\text{--}20 \text{ min}$  (the representation of  $10\dots 20 \text{ min}$  or  $10 \div 20 \text{ min}$  is incorrect); the units of measurements are written only after the second value.

The dimensions of samples are written as  $5 \times 5$  mm or  $200 \times 200 \times 1$  mm; however, use  $5 \times 5$  mm<sup>2</sup> for an area.

3. Formulas in the text should be numbered continuously. It is desirable to write formulas so that they are not multileveled. To this end, use  $\exp x$  instead of  $e^x$ . Represent fractions using a slash; brackets should be also arranged carefully so that it is easy to differentiate the numerator from the denominator. Avoid multilevel indices (e.g.,  $B_{qz}$ ). When writing very long formulas that can require more than three transfers from one line to another, introduce separate symbols for some of the components of this formula. Especially, authors should avoid the situation where the denominator cannot be completely arranged in a column.

## FIGURES

Each figure should be presented on a separate A4 page, including figures with letter designations (for example Fig. 1a and Fig. 1b are reproduced on two different pages). Margins on all sides should be at least 2.5 cm.

Plots in the figures are presented so that all points and lines are clearly seen and do not merge when the figure is decreased to the column size (80 mm); on a journal page, all symbols and letters should have a size no smaller than 1.5 mm and no larger than 3 mm.

When choosing the type of presentation of curves and lines, one should take into account the following priority in the designations adopted in the journal: (i) solid line; (ii) dashed line; (iii) dashed-and-dotted line; (iv) dotted line; and (v) other designations (alter nation of short and long dashes, etc.).

The tick marks on the axes should be directed inward. A figure should not be overloaded with points, curves, and numerical designations. You should also limit the number of inscriptions in the figure itself; it is recommended to use numerical or lettered designations and, if possible, to transfer the explanatory comments to the caption or text.

Names of physical quantities on the axes and in the figure's field are written in Roman font (e.g., Intensity), and designations of physical quantities (and their subscripts and superscripts) are given in Latin and Greek letters. The lettered Latin designations of physical quantities are italicized ( $U$ ,  $I$ ,  $t$ ). The International System of Units (SI) for the unit of measure of physical quantities should be used. The name or designation of a quantity plotted along the axis is separated from the corresponding unit by a comma and a space. It is recommended to position common decimal multipliers of measured quantities in front of the corresponding unit rather than near divisions on the axis; for example,  $I$ ,  $10^{-5}$  A or Current,  $10^{-5}$  A.

Numbers at tick marks on axes are written horizontally. The numbers of curves ( $1$ ,  $2$ ,  $3$ , ... or  $1'$ ,  $2'$ ,  $3'$ , etc.) should be italicized. Examples:

within the figure itself:  $n$ -GaAs;  $E_{\text{CdTe}}^{\text{LO}} = 0.1$  meV;  $T_{\text{K}}^{2\Omega} = 10$  mK;

on the axes:  $N_{\text{GaSb}}^{a^{3/2}}$ ,  $\text{cm}^{-3/2}$ ;  $M_{\text{H}}^{1/3}$ , arb. units; Intensity, arb. units; Length,  $\mu\text{m}$ .

It is recommended to write arbitrary units on the axes as arb. units.

Additional useful information can be included in figures. It is recommended to write inscriptions of this type in the figures (except for cases where italics are used, as mentioned above) using lowercase letters in Roman font. The editorial board has the right to change the formatting of figures that do not comply with the above requirements.

We ask authors to follow these guidelines and prepare manuscripts carefully. Manuscripts formatted not according to these rules may be returned to the authors.