

## Instructions for Authors of the Journal *Instruments and Experimental Techniques*

The experience of the editorial board (EB) of *Instruments and Experimental Techniques* (IET) shows that many papers cannot be published in the form submitted by authors because of its discrepancy with the rules of IET. This involves an unacceptably large work on editing articles by both the editorial staff and authors. The process of reducing articles to the state satisfying the potential readers of the journal leads to longer periods before publication. This situation indicates that the brief rules for the authors presented in each issue must be commented and supplemented with detailed recommendations for authors writing and preparing articles for publication.

The EB has elaborated the following recommendation and insistently asks the authors to follow them when writing articles. The fulfillment of these rules will allow them to avoid unjustified expenditure of force and time and will facilitate the cooperation of authors with the EB, which is aimed at the most complete delivery of the essence of their work to readers.

### 1. THE MAIN REQUIREMENTS FOR THE CONTENTS OF ARTICLES

An article must correspond to the profile of the journal and the accepted *forms of publication* and be *original and informative*. If an article does not correspond to any of these requirements, it cannot be published. This rejection may occur at any stage of the work with an article, including the case of a positive review, because the right of final opinion of each article is left to discretion of the EB.

**1.1. Profile of the journal.** IET publishes articles devoted to techniques of physical experiments and the development of new facilities, instruments, and technological methods used in the practice of research laboratories. The subjects of IET are represented completely and in detail by the rubricator of the subject index published every year in no. 6.

The EB constantly corrects the journal profile in accordance with the development of science and technology. Therefore, an article may be rejected despite of a precedent.

Articles devoted to various aspects of industrial technologies are unsuitable for IET. They should be submitted to appropriate specialized journals. It should be taken into account that articles on problems of metrology are published by the journal *Izmeritel'naya Tekhnika* (*Measurement Techniques*) and on the

analysis of operation of radio-electronic devices, by *Radiotekhnika i Elektronika* (*Radio Engineering and Electronics*) and *Voprosy Radioelektroniki* (*Problems of Radio Engineering*).

Articles devoted to the general computer engineering directly not pertaining to some experimental physical problem are not published by IET. They should be sent to appropriate specialized journals.

There are a number of journals whose subjects overlap the subjects of IET. In these cases, proceeding from the interests of readers, we recommend to submit an article to the journal in which a greater part of the materials on the issue treated in this article was earlier published.

**1.2. Forms of publication.** The following forms of publication are provided in IET: reviews, original papers, comments on papers, which were earlier published in IET, descriptions of new instruments and materials manufactured in laboratories, and advertisements on new produced instruments, specialized exhibitions, and scientific conferences on the journal's topics.

**1.2.1. Reviews.** IET publishes reviews devoted to any important problems of physical experimental techniques of wide interest. Reviews must be meant for experienced readers—physicists who, nevertheless, have no appreciable experience in a particular considered area. The main objective of reviews is to help readers to orient themselves in a new field of research, evaluate the opening possibilities, and facilitate the search of publications describing the most interesting solutions of arising problems. Correspondingly, a review must elucidate the following issues: fields of application of the considered methods and devices; their position in the row of analogous or close methods with the critical analysis of advantages and drawbacks; description of physical principles with the analysis of fundamental and achieved technical limits; brief descriptions of particular practical solutions, most successful from the standpoint of the author of a review, described in the literature. It is desirable for a review to have a brief introduction elucidating the main problems, notions, and terms.

Note that a review must not be reduced to a presentation of the obtained information and bibliography. It is unnecessary to mention all studies known to the author in the considered field, and citing a list is absolutely unacceptable. Each paper from the list of references must be expounded so that an interested reader

would be able to evaluate the practicability of studying it in view of problems facing him.

Reviews based mainly on papers published many years ago and considering issues that are comprehensively elucidated in books are rejected by the EB.

Reviews containing only descriptions of instruments produced by industry (including foreign companies) substituted for catalogs and advertisements do not satisfy the requirements of IET and are rejected.

Authors must bear in mind that, in addition to the direct task—to inform on a new field of studies—reviews must contribute to widening of the horizon of all readers of the journal. Therefore, the EB imposes high requirements for the quality of the presented materials. Reviews are considered as a literary work for which a corresponding fee is paid. This involves an obligation to thoroughly write a review, clearly present the material, and follow the stylistic and grammatical rules of Russian.

1.2.2. **Original articles** must contain: description of new methodological approaches, setups and instruments, the creation or improvement of the main characteristics of which have been accomplished on the basis of new ideas or new physical results; presentation of studies of the operation of commercial devices in regimes extending the possibilities of their application but not provided by the manufacturer and improvement of these devices; description of laboratory methods for obtaining new materials and specimens for studies (crystals, films, etc.). The subject of an article must have specific applications to problems solved by physical experimental methods described and illustrated in the article.

The editorial staff (ES) of IET recommends preparing the reports, in which it is proposed to improve devices and setups by a simple replacement of their elements by new analogues, for publication in the section “Instruments Manufactured in Laboratories.” The descriptions of setups in which known methods are implemented by using commercial or earlier described instruments according to their direct functions, as well as reports on the use of known methodological approaches, cannot be published.

The original character of the presented material is the necessary but not sufficient condition for publication in IET. Only such articles are accepted the contents of which is of interest for a wide circle of researchers. The descriptions of setups, devices, and methods for solving particular problems or those that can be used only in certain specific experiments are recommended to be joined to papers describing the results of measurements and published in appropriate journals.

Original papers must be written so that, using them, a qualified reader would be able to reproduce a device or method. For this purpose, they must contain exhaustive information on original solutions supple-

mented with references to studies from which well-known elements were borrowed.

1.2.3. **Section Comments to Articles** includes essential notes concerning articles published in IET earlier and answers of authors to them. The questions of priority cannot be discussed in the journal. They should be solved according to a procedure established by law.

1.2.4. **Section Instruments Manufactured in Laboratories** includes information about new physical instruments developed for commercial production and in laboratories. It must contain the name of an instrument (material), a brief description of the operating principle, and the main performance characteristics. The information on an instrument may be complemented with its photograph in the working state; a photograph of a material is presented only if it gives a pictorial view of its quality. A graph or a diagram characterizing the capabilities of an instrument is allowed. The authors of papers published in this section take an obligation to report exhaustive information about the described instruments and materials to interested persons; for this purpose, an address is published, at which a request for supplying an instrument or additional information can be sent.

1.2.5. **Described devices** must be manufactured and tested in an experiment that proved their advantages over those described earlier; these improvements must be distinctly emphasized in the article. The EB avoids publishing articles either considering an idea of a new method or instrument, which were not implemented, or describing an invention. The exception is the cases where the practical implementation of an idea requires great material expenditures, thus making it desirable to initiate a preliminary public discussion (e.g., accelerators, telescopes).

1.2.6. **Advertisements** must correspond to the subject matter of the journal.

## 2. RECOMMENDATIONS FOR WRITING ARTICLES

**2.1. Sizes of published materials.** No formal restriction are imposed on the size of reviews and original articles. The recommended sizes are ~30 pages for a review and ~8–12 pages for an original article. For other kinds of publications, the established norms are as follows: a comment and an answer to it—2 pages and 1 figure for each; brief information on new instruments—2 pages and 2 pages (within one page of the journal); advertisements and other announcements—according to an agreement. The text is typed with double line spacing.

The ES does not recommend the authors to artificially divide a large article into several small articles or sacrifice the completeness for the sake of brevity. At the same time, one should avoid increasing the size by including into an article common information or

information indirectly concerning its topic, detailed mathematical manipulations, excess citing of the literature, etc.

The necessity of strictly fulfilling the requirements stated in the previous section requires that the authors carefully prepare the presented material. The form of presentation is dictated by the material and the individuality of the author, and it is impossible to give detailed recommendations for all cases. Therefore, let us consider only the most general regulations.

**2.2. Article structure.** First, an author must think through the article structure and the method of representing a particular material: in the form of a text, graphs, or tables. One should avoid presenting tables and figures if the information contained in them can be completely expressed textually. For example, it is unnecessary to illustrate the phrase "The dependence of the output signal on the input signal is linear to an accuracy of ... %" with a plot. Graphs of functions expressed by simple analytical formulas should not be presented. Figures must not duplicate one another. For example, for functions of two independent variables, it is sufficient to present only one family of curves, for which one variable is a coordinate and the other is a parameter.

It is undesirable to present all results obtained by the author, if this does not considerably increase the information content of the article. For example, in studying a batch of devices, the characteristics of which deviate from the ideal or averaged values owing to uncontrolled processes (e.g., zone characteristics of photomultipliers), it is sufficient to present only one or two characteristics and the range of their variations for the entire batch.

Structural diagrams should be presented only for facilities with complex links and composed of units, most of which are not original and the schematic diagrams of which are not presented. To clarify the structure of an original instrument for which a schematic diagram must be necessarily presented, it is recommended to separate individual units in the diagram with dotted frames and correspondingly designate them. Setups containing a small number of devices with a simple structure of links between them, e.g. composed of devices connected in series, can be easily described in a text.

Tables should be presented only when it is required to simultaneously present different characteristics of many similar samples or devices or one device operating in different modes. The characteristics of single devices should be described directly in the text. If we deal with a single characteristic, the graphical representation should be preferred because of its clearness. In this case, a table is justified if the information in a figure is distorted, e.g., at a measurement accuracy better than 1%.

**2.3. Writing of an article.** The text of an article usually contains the following parts: introduction; a theo-

retical analysis of a particular way to implement a method or a device; a technique for studying the characteristics of interest; the results obtained, examples of application, and recommendations for using the proposed solution; a list of references; and figure captions and, if necessary, appendices. Depending on the specific contents of an article, some of these sections may be absent or minimized. For example, for an instrument with obvious fields of application, it is quite sufficient to describe the design and the obtained results.

**2.3.1. The Introduction** must contain a brief and functional description of the purpose of the work, analysis of the most efficient alternative methods for solving a formulated problem, and presentation of the requirements imposed by the peculiarity of an experiment. In the introduction, authors are often eager to present information having no direct relation to the theme of an article and describe in detail general problems facing the research team incorporating the author, who solves a particular problem. The information of this kind is addressed most likely not readers but the EB in order to persuade it of the importance of this article. This should not be done because the question of publication is solved on the basis of the assessment of what has been done by the author, and the prospect of the general task is disregarded.

The introduction should not be needlessly overloaded with both the description of what was done earlier and consideration well known to specialists. Only those studies should be cited in which the most successful designs were found or, at an approximately the same level, which are published in more accessible sources (in books or journals). From studies of the same authors, it is desirable to cite only the most complete and latest papers. The introduction must not exceed 10–20% of the article size and, in many cases, may be absent at all if the objective of a study is disclosed to a sufficient degree by the title and abstract.

**2.3.2. Theoretical substantiation** must contain descriptions of the physical phenomena underlying the proposed method or device, and the quantitative component of the issue must be clarified with sufficient completeness. It is insufficient to present only the formulas describing the processes considered. The boundaries of the area of their applicability must be necessarily indicated, and substantial quantities must be numerically estimated. When an author uses a theory taken from other studies, it is undesirable to rewrite cumbersome formulas with explanations of letterings, and it should be sufficient to cite the literature and give numerical estimates.

If a theoretical analysis of the problem is one of the main components of the original contents of an article, it is recommended not to present all intermediate calculations and but to declare only the initial and final results. Intermediate formulas are needed only if the calculation procedure is complex and if the intermediate results are of independent interest. Calculations must not be presented in a general form if the

final result is obtained under the use of simplifying assumptions. It is better to simplify the initial formulas, thus, as a rule, facilitating calculations and making them clearer. The necessary cumbersome calculations should be shifted to "Appendix."

2.3.3. Description of the technique for implementing a method or device is the main section of most papers. The contents of just this section must ensure the possibility of reproducing the described proposal. If a new measurement method is described, the block diagram realizing this method must be depicted or described, and all used instruments, their operating modes, and the parameters of noncommercial instruments must be presented.

For original electronic devices, the complete circuit diagrams or (for complex instruments) circuit diagrams of original units must be necessarily presented with the references to the literature sources, from which other units were borrowed. The latter does not concern general-purpose units, such as power-supply units, on which no special requirements are imposed, amplifiers with ordinary parameters, etc.

For new designs, specific features associated with their implementation must be described; drawings of instruments and their basic modules must be presented; and structural peculiarities, the materials, and dimensions of the main parts must be given. Photographs should be presented only if they carry appreciable information. When characterizing a device, one should avoid such empty epithets as "special", "exceptional," etc., and describe specifically the particular feature of one or another part.

The operation of instruments should be described only if it is not quite clear from the description of the design, helps to tune the instrument (e.g., demonstration of time diagrams of operating radio circuits), and if the correct operation is possible only under certain conditions or requires difficult adjustment. It is unnecessary to enumerate in the text units and elements shown in figures.

2.3.4. When the technique for studying characteristics of a device is described, the measurement technique and the used instruments and facilities must be mentioned. If characteristics are obtained using routine widespread methods, this section may be almost completely omitted. In general, in most cases, this section must be quite brief and constitute a noticeable part of only those articles in which the main content consists in studies of characteristics various devices.

2.3.5. When the obtained results are described, it is necessary to present the main performance characteristics of the developed instruments and the quantitative results of the application of the developed methods and performed measurements. All characteristics must be specific and expressed numerically with the accuracy of the measured values. Fuzzy

descriptions including such expressions as "high accuracy," "wide range," "good reproducibility," "high response speed," "improved resistance," etc., are unacceptable.

2.3.6. Examples of application and recommendations for using a proposal are needed in the cases where the described technical solution leads to essentially new possibilities or considerably extends those existing earlier. The main objective of this section is to show that the proposals contained in an article have been actually implemented and the corresponding setups are serviceable and ensure the expected parameters. This must be achieved in the study itself or in the references to the published papers, the results of which were obtained using the proposed methods or instruments. If an instrument the application of which is obvious (voltmeters, manometers, etc.) is described in an article, this section may be absent.

2.3.7. A list of references must contain bibliographic references to all papers mentioned in the text of an article. Recall that it is desirable to cite only the papers that are really essentially needed and will help an interested reader to deeper study the considered questions. If there are several publications by the same authors, it is sufficient to refer to the last representative paper, in which all previous papers are usually cited.

2.3.8. Figure captions must be such that a reader could understand from them what is presented in a figure without reading the text of an article. A caption may be absent if the main content of an article reduces to a description of a particular figure, e.g., the design of a device.

**2.4. Preparation of an article for sending to the ES.** After an article is completely written, the title can be finally formulated and the abstract can be written.

2.4.1. The title must be specific and precisely correspond to the main contents of the article. It is undesirable to reflect all aspects of the article in the title and limit without necessity the possible fields of using the described device. This usually occurs if, in the title, emphasis is given not to a device itself or a method but to the purpose for which it was used by the author. In the title, it is forbidden to use slang words, abbreviations, rarely used, specific, or technical terms first introduced in the article; such fuzzy epithets as "simple," "improved," etc., should be avoided.

2.4.2. The abstract must be specific. Its main task is to help a reader to determine whether he needs to read the article. It must be clear from the abstract what was done in a study, what is its novelty, what principles were used, and what results have been obtained. Presenting numerical characteristics (errors, sensitivity, response speed, etc.) is especially necessary when instruments and methods, whose variants are already known, are described. Experience shows that, for this purpose, 10–15 lines of a text are

sufficient and a larger size of an abstract is unnecessary. Abstracts that are extended variants of titles and carry no additional information are senseless.

An abstract must be understandable independently of an article because, at the end of each issue of IET, abstracts of the papers, planned to be published in the next issues, are presented.

2.4.3. A ready article is recommended to be read by a colleague less experienced in the considered field than the author. It will be easier for him to judge what aspects of the problem, which seem to the author to be obvious, are insufficiently considered in the article. It is also useful to put the article aside for two or three weeks, then read it attentively once more, check whether all the requirements of the ES are fulfilled, and introduce the necessary changes. Only after this, the article may be submitted to the journal. The ES assures authors having little experience of writing articles that this measure will not increase but significantly reduce the time of publication and the further work of authors with articles.

### 3. RECOMMENDATIONS FOR PREPARING ARTICLES

**3.1.** All technical requirements expounded at the end of each journal issue.

**3.2.** The text of an article must be written in the literary language with observation of the syntactical rules. If an author is not sure of his knowledge of literary Russian, he should resort to help of colleagues. The ES is not always able to bring a text to general literary norms, because an illiterate text cannot often be unambiguously read and decoding of the meaning without participation of an author is impossible. Each addressing an author naturally delays publication.

Too long phrases that are difficult to read, excess introductory words, indistinct epithets, slang and professional words should be avoided. Articles should not be overloaded with abbreviations: the presence of more than three or four abbreviations (disregarding such widespread abbreviations as PC, PMT, etc.) in one articles makes it inconvenient for reading. All introduced terms, abbreviations, and conventional designations not belonging to those of general use must be explained.

A text must be divided into separate logically linked parts by paragraphs. A paragraph beginning with the first line indent must contain 10–15 lines. In large articles, it is desirable that a text be divided into sections with titles. The division must not be too fine: each entitled section must contain at least 2–3 pages. For finer partitioning, the initial phrases or their parts (in the manuscript, such phrases should be underlined) may be italicized.

Manuscripts should be printed in double spacing. Printing in smaller spacing may cause difficulties for authors. Lack of space for an editor's corrections often

leads to a situation that, after editing, a manuscript takes the form unsuitable for submitting to the publishing house. In such cases and also if the volume of editing is great, the manuscript is returned to the author for reprinting.

**3.3.** All formulas must be legible and unambiguously understandable. For this purpose, complex arguments must be bracketed, e.g.,  $\sin(t\sqrt{a^2 + b^2})$  but not

$\sin t\sqrt{a^2 + b^2}$  should be written. If a slash (/) is used as the division sign (this is desirable for saving place), the entire denominator and, if necessary, the numerator must be bracketed. For example, an expression of the  $a/bc$  type can be understood as  $(a/b)c$  or  $a/(bc)$ . In short formulas arranged in a single line, it is desirable to use the form  $\exp(\dots)$  but not  $e^{(\dots)}$ . To simplify the reading of complex formulas, we recommend to use different brackets  $\{[(\dots)]\}$  in the indicated succession.

To compactly write complex formulas, conventional mathematical symbols  $\Sigma$ ,  $\Pi$ ,  $\nabla$ , etc., must be used. Repeated combinations of symbols should be replaced their designations. A group of formulas

$$\begin{aligned} a_1 &= \dots, \\ a_2 &= \dots, \\ a_3 &= \dots \end{aligned}$$

should be replaced with a single-line expression in the form

$$a_i = \dots, \quad i = 1, 2, 3.$$

Complex indices for conventional symbols should be avoided if it is not justified by a large number of variables appearing in an article. If only several symbols are used, it is better to dispense with indices.

**3.4.** Figures are usually the most informative components of an article, and the ES pays much attention to them. Unsatisfactorily prepared figures are often a cause of their return to the authors of articles. Therefore, we ask the authors to read this subsection very attentively.

Figures should not be complicated without necessity. Dots on graphs must be graphically simple and properly distinguishable. Errors in printing are excluded for figures and complex tables obtained by the computer technique, and presenting graphic material in this form should be preferred. The ES asks sending figures of large dimensions for small details and inscriptions to be easily readable.

It should be noted that figures one and two columns wide ( $\sim 8$  and  $\sim 17$  cm, respectively) or occupying the entire page ( $\sim 23$  cm) are the most convenient for the typographic reproduction. Therefore, it is desirable to represent separate elements and inscriptions on figures so that, when the figure size decreases to one of the above dimensions, letters and numbers become 1.5–2.0 mm high, elements of electronic circuits and individual points become 3–5 and 1 mm in size, respectively, and lines are at least 0.5–1.0 mm apart.

3.4.1. **Structural and schematic diagrams.** Separate elements in diagrams of setups and instruments must be arranged compactly without large gaps between them, uniformly filling a rectangular field. However, if such an arrangement significantly complicates a figure and links between units and hinders the visibility of the diagram, one may sacrifice compactness in favor of clarity. A figure should not be overloaded with such auxiliary units as power sources, which are always necessary for normal operation of instruments.

It is desirable that names of units be written directly on them. For commercial instruments, their types must be designated, and for devices mentioned in a text, abbreviated designations must be used, which, if necessary, should have sub- and superscripts (e.g.,  $CC$  is a coincidence circuit,  $I_{10}$  is circuit  $I$  no. 10,  $SD$  is a synchronous detector, etc.). Otherwise, the full names of instruments must be given. Names in a figure should not be duplicated with numbers. Block diagrams with numbers of units without their names are difficult to read, and this form of figures is undesirable. Digits can be used to mark parts of setups imaged by conventional symbols (detectors, lenses, diaphragms, etc.).

A complete schematic diagram is desirable only for simple instruments. For a complex scheme, as a rule, it is better to use a mixed diagram, in which routine components (e.g., amplifiers with ordinary parameters) and repetitive elements are given as in a structural diagram, and schematic diagrams are presented only for original units. If an article contains a structural scheme, it is sufficient to present schematic diagrams of only original modules.

Schematic diagrams should not be overloaded with such elements as standard power supply units. It is sufficient to designate the rated voltages fed to appropriate buses and, if necessary, the rated currents. Standard power-supply circuits of integrated circuits and all excess inscriptions, e.g., positional designations  $R$  and  $C$  not mentioned in the text, must be removed. For trivially repeated circuits, e.g., counting registers, elements of decoders, etc., only one or two first elements and the last element must remain in a figure and a gap shown between them must be filled with dotted a extension of the connecting buses. When multichannel instruments with parallel identical channels are described, it is sufficient to represent the schematic diagram of one channel, and other are conditionally imaged in the form of, e.g., duly designated squares. Connections of wires in connectors in described custom-made devices must not be shown without necessity; usually, it is not essential but complicates a figure and increases the occupied area.

3.4.2. **Drawings or sketches of constructions** should not be overloaded with detailed pictures of secondary (from the standpoint of the article's contents) and routine units. These are usually designs of flanges, vacuum-tight seals, micrometers in units of precise displacements, etc.

However, all substantial units must be imaged as completely as possible. As a rule, the ratio of dimensions must be held, but sometimes, for the sake of clarity, it may be violated and correspondingly stipulated in the text or caption. The main dimensions must be indicated in a figure.

A figure must be proportional so that the smallest elements must have dimensions at least  $\sim 5\%$  of the maximum. To show smaller elements, the corresponding unit must be imaged in a large scale. Note that the full size of a printed figure is determined by its smallest details, and an insufficiently thought-out figure will result in a wasteful use of the journal volume.

All existing elements of a device must be marked in a figure and named in the caption or text. As a rule, figure must have captions.

3.4.3. **Plots and diagrams** must be arranged so as to use the entire figure area. This is achieved by a correctly chosen coordinate system. For example, dependences of the  $y = a/x$  and  $y = \exp(x)$  types must be represented in the  $(y, x^{-1})$  (not  $(y, x)$ ) and  $(\ln y, x)$  coordinates, respectively. Because the dynamic range of the graphically represented information is limited, then, when the values of a function and/or an argument change within a range exceeding  $\sim 1 : 10$ , logarithmic or semilogarithmic coordinates must be used.

Authors must remember that the accuracy of graphical representation is not higher than 1–2%. If information must be represented at a higher accuracy, the scale of the corresponding axis must be increased. If, in this case, the considered quantity changes within a wide range, it is desirable to plot not this quantity itself but the difference between it and a relevant simple functional dependence. For example, the measured values slightly differ from a linear dependence  $y = ax$ , one should plot the dependence  $(y_i - ax_i)$  on  $x$ , where  $y_i$  is the measured value at point  $x_i$ . An alternative method for representing such data is a table or a verbal description (indication of the deviations of the measured points from an algebraic function).

It is desirable that similar dependences, e.g., values of  $f(x, y)$ , where  $y$  is a parameter (which can also be a sample number), be plotted as a common graph, if the values of  $f$  do not greatly change with  $y$ . However, more than four (five) curves should not be plotted on a common graph, and different curves of such a family must differ by at least 5–10%. If they are located closer to one another, some of the intermediate dependences must be removed provided that they carry no essentially new information.

When an article is illustrated with records obtained with automatic devices, only informative segments of curves should be shown. For example, if a record presents several spectral lines, the regions of a zero signal longer than three (four) linewidths should be omitted and breaks in the corresponding axis should be given. If the number of lines in a record is small (1–3), the

scale must be such that the linewidths would be comparable with their heights. If several successive records are shown in a figure, it should be composed so that these curves are enclosed one into another. Extraneous designations, e.g., a too dense coordinate grid and a chart-strip brand, which are often observed during scanning in experimental records, must be removed from a figure.

When distributions obtained with multichannel instruments or using computer means are represented, it is necessary either to omit segments of a background signal, or not to plot points for them and show these segments with a solid or dotted line. In regions where a signal changes slowly, points are usually located very densely and, proceeding from the polygraphic requirements, such figures have to be represented on a too large scale. Figures must have coordinate axes with designated plotted quantities and scales. A coordinate grid for graphs must not be very dense or the coordinate axes must be duplicated above and to the right of a figure.

3.4.4. Photographs obtained on experimental facilities, e.g., oscillograms, tracks in chambers, microphotographs, etc., are usually characterized by low quality, low contrast, extraneous light-striking, parasitic signals, etc. One should remember that, upon printing, their quality may only deteriorate. Therefore, such materials must be prepared very carefully: oscillograms must be photographed so that the image of a coordinate grid would be weaker than that of a useful signal; in one of the copies submitted to the ES, the considered details observed in photographs must be indicated with arrows or in any other way; and the field that must be reproduced in printing should be restricted to an actually informative area. If the quality of a photograph is so low that the possibility of its reproduction is uncertain, it must be complemented with a drawing on a tracing paper. A scale must be present in all cases.

3.4.5. Half-tone photographs of instruments or their parts are submitted for articles published in the rubric "Instruments Manufactured in Laboratories" and in original articles when the information contained in them is important and cannot be or is difficultly expressed in another way. Photographs must be of high quality, contrast, and have properly resolved details. No foreign objects or people must be present in them. For setups described in the rubric "Instruments Manufactured in Laboratories," only instruments developed by an author but not commercial devices must be imaged in photographs. Front photographs of new electronic devices must be taken. The scale must be designated with a straight-line segment of certain length. For photographs illustrating original articles, arrows with digits in one copy must indicate and explain the main units and components in a caption or a text.

#### 4. ORDER OF ARTICLE ADVANCING

Newly submitted articles corresponding to the specifics of IET and containing no obvious violations of the journal's requirements are directed to reviewing. The decision on the acceptance of an article is made taking into account the opinion of a reviewer; in some relatively clear cases, articles may be accepted without reviewing, thus favoring accelerated publication. Authors have a right not to report their names to the reviewer. For this purpose, they must submit an additional copy of the article without the names of authors, their address, and acknowledgments. Comments to articles are initially addressed to the authors of the considered articles, who may submit their answer. The comments and the answer are then considered according to the standard procedure and, if accepted for publication, are published together.

If the author of an accepted article has fulfilled all the above recommendations, his interaction with the ES reduces to examination of the materials and proofs prepared by the ES.

The articles carefully prepared in accordance with "The Instructions for Authors" and these recommendations and, therefore, evoking no questions of the editor and requiring no refinement and correction are published earlier than those needing to be refined and corrected. Otherwise, the ES will address the author as many times as necessary for bringing a manuscript to a satisfactory form, or the article will be rejected.

The ES asks authors to remember that their aims coincide—to publish within a short time an interesting article satisfying readers, highly qualified specialists. A reviewer and a scientific editor are the first outside readers, and the author must attentively perceive their remarks and respond quickly and to the point, acting in full collaboration. Even if it seems to an author that the remarks of a reviewer are incorrect, the author must be aware that this is caused by shortcomings of the presented material. Therefore, any remark requires that alterations removing arising contradictions be introduced into the text of an article. One should not avoid improving an article proposed by the ES by alluding to that fact that the acceptable volume will be exceeded, because the latter is not limited.

The ES asks the author not to delay the refinement of articles. Article returned by authors in a period longer than two months are considered as newly submitted.

If authors have questions to the ES, they must be clarified by correspondence. Telephone calls to members of the EB and scientific editors sometimes used by authors are inexpedient. Hundreds of articles on different subjects are annually submitted to IET, and an editor is unable to remember their contents. Therefore, he will hardly tell an author about the article more than that written in the letter from the ES and give any recommendations different from the above.