

# Physical Review

# Style and Notation Guide

Instructions for correct notation and style  
in preparation of REV<sub>TEX</sub> compuscripts and conventional manuscripts

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### 3. Identifying figures

Number each figure consecutively with an arabic numeral according to the order in which it is discussed in the paper. Write the figure number and first author's name preferably on the bottom of each figure. If not possible, write them on the back of the figure with a very soft pencil. This will ensure proper matching of figure and text. *All figures must be cited in consecutive order in text.* For example, you could refer to your first figure in one of these ways:

**Form:**

(a) Figure 1 shows experimental results.

(b) Experimental results are shown in Fig. 1.

Note that the word figure is written out when it begins a sentence, but it is abbreviated at other times. The production staff will place each figure as close as possible to its original citation when designing the final layout of the paper.

### 4. Figure captions

Give each figure a separate caption. Like a table caption, it should be concise. It may be made up in part of an abbreviated sentence or group of sentences in a single paragraph. It must begin with FIG. (all capital letters), followed by the appropriate arabic numeral and period, and then by the abbreviated explanatory sentence or sentences.

**Form:**

FIG. 1. Plot of  $\chi^2$  against different values of  $\text{Re}[f_N^-(0) + f_N^+(0)]$ . Solid curves for the  $x$  plane; dot-dashed curves for the  $z$  plane.

Within the explanatory material of a caption include definitions of all symbols, abbreviations, and acronyms used in the figure that have not been previously defined in text. Also describe separate figure parts or insets.

**Form:**

FIG. 1. Part of the fluorite structure around an oxygen vacancy; o, oxygen vacancy; •, normal oxygen ion.

FIG. 1. Continuous line: solution of the Lippmann-Schwinger equation (13) with the use of dynamical self-energy of Eq. (5). Broken line: static Coulomb wave function given by Eq. (9) of the text. The inset shows the behavior in the near-surface region.

FIG. 1. Cluster geometries used for (a) substitutional site in bcc Fe, (b) octahedral interstitial site in bcc Fe, (c) tetrahedral interstitial site in bcc Fe, and (d) octahedral interstitial site in fcc Co and Ni. Filled symbols denote hydrogen positions and unfilled symbols show host-atom positions.

## III. STYLE INSTRUCTIONS FOR GRAMMAR, PUNCTUATION, SPELLING, HYPHENATION, AND ABBREVIATION OF UNITS

### A. Grammar and punctuation

Good grammar and clear punctuation are essential to successful technical writing. Clear, simple sentence structure best presents scientific ideas and mathematical formulas. For a general guide to good grammar, use Nicholson's *Dictionary of American-English Usage*.

Specific modification and adaptation of the basic rules are sometimes required by scientific conventions. In addition, the combination of forms including abstract, text, mathematical formulas, figures, tables, and references also creates the need for special structure and style considerations. Below are guidelines to assist you.

#### 1. Text and math as sentences

(1) Treat the text and mathematical formulas as an entity. Punctuate mathematical expressions as sentences or parts of sentences.

**Form:**

A slight rearrangement of terms then gives

$$D_s = \bar{\xi}_s X^{-1/2} - b, \quad (14)$$

where

$$X = 4t\chi^2(-\ln t)/\pi^2, \quad (15)$$

$$\bar{\xi}_s = \xi_s/t^{1/2}, \quad (16)$$

and the reduced transition temperature  $t$  is defined to be  $T_c/T_{cs}$ .

(2) Avoid beginning a sentence with a symbol if the sentence before it has ended with a symbol or number.

#### 2. Use of the comma

(1) Do not surround a symbol with commas or parentheses when it immediately follows the noun that defines it, but do insert the commas or parentheses if another phrase intervenes.