Preparing figures for publication

Halftone Art

Definition: Photographs, drawings, or paintings with fine shading, etc.

If any magnification is used in the photographs, indicate this by using scale bars within the figures themselves.

Halftones should have a minimum resolution of 300 dpi.

Combination Art

Definition: a combination of halftone and line art, e.g., halftones containing line drawing, extensive lettering, color diagrams, etc.

Combination artwork should have a minimum resolution of 600 dpi.

Color Art

Color art is free of charge for online publication.

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.

If the figures will be printed in black and white, do not refer to color in the captions.

Color illustrations should be submitted as RGB (8 bits per channel).

Figure Lettering

To add lettering, it is best to use Helvetica or Arial (sans serif fonts).

Keep lettering consistently sized throughout your final-sized artwork, usually about 2–3 mm (8–12 pt).

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.

Avoid effects such as shading, outline letters, etc.

Do not include titles or captions into your illustrations.

Graphs should be self-explanatory, their purpose evident without reference to the text. Indicate clearly what is being plotted, in both the horizontal and the vertical directions. Include appropriate units. Take care to preserve standard forms for symbols and abbreviations, as you would in text. Standard units should be well spaced off and enclosed in parentheses. Orient letters and numbers so that they may be easily read from the bottom or the right-hand side of the graph. Relevant nongraphic material, such as the key to the symbolism in the graph, may be included within the confines of the graph frame if it will fit without crowding; otherwise put the explanatory material in the caption.

Figures should be planned for the column width (8.4 cm) of the journal in .eps, .tiff or .jpeg format. If the detail shown requires it, 1.5 or 2 columns may be used. All figures must be prepared so that the details can be seen after reproduction. They must have a clear background and unbroken lines with as much black-white contrast

as possible. The symbol width and lettering height on the journal page should be at least 2 mm. Avoid small open symbols that tend to fill in, small dots and decimal points, and shading or cross-hatching that is not coarse enough to withstand reproduction. Curves should be smooth; curves and lines should have consistent line widths of sufficient weight [final weight of at least 0.18 mm (0.5 point)].

When you have multiple graphs, or graphs and others illustrative materials that are interrelated, it may be most efficient to present them as a compound figure. Compound figures combine multiple graphs into one common figure and share a common legend. Groups of figures that share a (single) caption must be labeled "(a), (b)," etc., and, when referred to from the Results text, is specifically identified by that letter, e.g., "...(Fig. 1a)". The legend of the compound figure must also identify each graph and the data it presents by letter. The figure itself should have properly labeled axes with correctly abbreviated units enclosed in parentheses. Use consistent lettering and style as in the body of the text (correct capitalization, unslashed zeros, proper exponential notation, superscripts and subscripts, decimal points instead of commas, etc.). Use the form R (10^3 Ω), not R×10^3 Ω. Use half spacing within compound units, not hyphens or periods. Avoid ambiguous usage of the solidus ("/"), e.g., (mb/MeV sr), not (mb/MeV/sr).

If possible, do not use powers of ten in axis labels. Better still, attach the power of ten to the largest number on the axis.

Whenever possible, use integer numbers on the axis scales of figures (1, 2, 3, or 0, 5, 10, not 1.58, 3.16, 4.75 or 1.5, 3.0, 4.5). If this is not feasible, then there must be a number both before and after the decimal point: Use 0.5, not .5, and 5, not 5., etc. Do not use unnecessary decimal places: 1.0, 1.5, 2.0 is acceptable, but not 1.00, 2.00, 3.00.