



Preparing Your Art and Figures

To expedite publication of your paper, please follow these style guidelines in preparing your figures for your revised manuscript. Note that some of these instructions (with respect to format and resolution) differ from the instructions for figures with initial manuscript submission.

Resolution and File Format

Please send the figures electronically using our Web interface for revised manuscripts. Please submit each figure as an individual file. Very large figure files should be compressed and sent as a zipped archive (see “Compressing files” below).

Resolution. For manuscripts in the revision stage, adequate figure resolution is *essential* to a high-quality print and online rendering of your paper. Raster line art should carry an absolute minimum resolution of 600 dots per inch (dpi) and, preferably, should have a resolution of 1200 dpi. Grayscale and color artwork should have a minimum resolution of 400 dpi, and a higher resolution if possible.

Please note that these resolutions apply to figures sized at dimensions comparable to those of figures in the print journal. Reducing or enlarging the dimensions of a digital raster image will also change its resolution. For example, reducing the dimensions of an image by 50%, with no change in file size, will double its dpi resolution; doubling the dimensions of the image will cut resolution by 50%.

Format. Electronic figure files at the revision stage must be in one of the following formats: Adobe Portable Document Format (PDF), PostScript (PS), or Encapsulated PostScript (EPS) for illustrations or diagrams; Tagged Image File Format (TIFF), JPEG, PhotoShop (PSD), EPS, or PDF for photography or microscopy. Authors who have created their files using a drawing or painting program such as Macromedia Freehand, Adobe Illustrator, or Adobe Photoshop should export the files to one of these formats (preferably PDF).

*We cannot accept files in other formats; in particular, we **cannot** accept:*

- Microsoft PowerPoint files.
- Figures embedded in Microsoft Word files.
- Figures prepared in PowerPoint or Word formats that have been converted to other, acceptable formats such as PostScript or PDF.

Electronic figures should be sized to fit on single 8.5" × 11" sheets; hard copies can be on 8.5" × 11" or A4 paper.

Compressing files. For extremely large figure files (i.e., individual figure files greater than 10 megabytes in size), authors are encouraged to compress their files into .zip or .sea archives (using a program such as WinZip or Aladdin Stuffit) and send the zipped archives rather than the uncompressed files. Compressing figure files in this manner should result in a significantly faster upload of your files using our revision upload site. **Please note that files should be compressed *only* for uploads of revised figures after peer review, *not* for uploads of new manuscripts before peer review.**

Modification of figures. *Science Signaling* does not allow certain electronic enhancements or manipulations of micrographs, gels, or other digital images. Figures assembled from multiple photographs or images must indicate the separate parts with lines between them. Linear adjustment of contrast, brightness, or color must be applied to an entire image or plate equally. Nonlinear adjustments must be specified in the figure legend. Selective enhancement or alteration of one part of an image is not acceptable. In addition, *Science Signaling* may ask authors of papers returned for revision to provide additional documentation of their primary data.

***Science Signaling* Style in Figures**

Figure layout and scaling

Figures in *Science Signaling* are commonly reduced to fit in 1 or 2 columns (1 column = 21p3 pi = 3.5" = 9 cm; 2 columns = 43p6 pi = 7.3" = 18.4 cm). In some cases, the suggested size will be marked on the edited copy of the paper. If not, assume that we will try to make dimensions of the printed figure as small as possible. If one figure in particular is key, please indicate that it should be given some preference in sizing.

In laying out information in a figure, the objective is to maximize the space given to presentation of the data. Avoid wasted white space and clutter.

- Titles or labels not absolutely necessary for understanding the figure should be removed and explained in the caption.
- Keys to symbols, if needed, should be kept as simple as possible and be positioned so they do not needlessly enlarge the figure. Details can be put into the captions.
- Panels should be set close to each other, and common axis labels should not be repeated.
- Scales or axes should not extend beyond the range of the data plotted.
- Do not use minor tick marks in scales or grid lines. Avoid using y-axis labels on the right that repeat those on the left.

Use solid symbols for plotting data if possible (unless data overlap or there are multiple symbols). Size symbols so that they will be distinguishable when the figure is reduced. Line

widths should be legible upon reduction (minimum of 0.5 pt at the final reduced size).

Color-mix and contrast considerations

- Avoid using combinations of red and green together.
- Please do not use colors that are close in hue to identify different parts of a figure.
- Avoid using grayscale.
- Use white type and scale bars over darker areas of images.

Typefaces and labels

Please observe the following guidelines for labels on graphs and figures:

- Use a sans-serif font whenever possible (we prefer Helvetica).
- Capitalize the first letter in a label only, not every word (and proper nouns, of course).
- Units should be included in parentheses. Use SI notation. If there is room, write out variables — e.g., **Pressure (MPa)**, **Temperature (K)**.
- Variables are always set in *italics* or as plain Greek letters (e.g., *P*, *T*, μ). The rest of the text in the figure should be plain or bold text.
- Type on top of color in a color figure should be in bold face. Avoid using color type.
- Use leading zeros on all decimals — e.g., 0.3, 0.55—and only report significant digits.
- Use capital letters for part labels in multipart figures — A, B, C, etc. These should be 9 pt and bold in the final figure. When possible, place part labels at the upper left-hand corner of each figure part; if a part is an image, set labels inside the perimeter so as not to waste space.
- Avoid subpart labels within a figure part; instead, maintain the established sequence of part labels [e.g., use A, B, C, D, E instead of A, B, C(a), C(b), C(c)]. If use of subpart labels is unavoidable, use lowercase letters (a, b, c). Use numbers (1, 2, 3) only to represent a time sequence of images.
- When reproducing images that include labels with illegible computer-generated type (e.g., units for scale bars), omit such labels and present the information in the legend instead.