TWO-COLUMN FORMATTING GUIDE

Introduction

This is a guide designed to cover the details of paper preparation to ensure uniformity and continuity for one-column proceedings. This guide is to be used in conjunction with the templates available for Micrsoft Word or LaTeX. It can also be used to help you properly format your paper if you are using another software package, such as:PageMaker, InDesign, Quark Xpress, Publisher, or Word-Perfect.

Note

Please do not add the Title Page Copyright Information or page numbering - as these items are added at the time of manufacture, for consistent appearance and sequenced numbering.

Artwork

- There are two types of figures you use in your paper: "line-art" (spot graphs, bar graphs, etc.) and "photo-images" (micrographs, photos, etc.). You will need to supply figures that will look good in a professional publication – that means including each type of figure at specific resolutions or "dots-per-inch" (dpi).
  - You MUST include photo-images at 300 dpi (minimum); failure to do so will result in washed-out and/ or blurred images when printed; even if photo-images are not scanned (i.e. the image is already in electronic format), they still must be set to at least 300 dpi for good reproduction.
  - If any line-art must be scanned, it MUST be scanned at 600 dpi (minimum); failure to do so will result in jagged lines when printed.
  - Images prepared for the web are set at 72 dpi and make for a very poor product; avoid using images pulled from web-based material.
  - The preferred file formats for any graphics are either EPS for TIFF; using other formats, such as JPG or GIF will decrease the value to some extent.
- Make sure all type in graphs and figures is large enough to read and understand.
- The readability of your paper in the finished publication is dependant on you providing good quality material.

Text

- The size of your typeface should be set at 9 points with ~10 point leading.
- The typeface should be a serif font such as the Times or Computer Modern (for LaTeX users) family of fonts.
- Keep all text and artwork within the template margins.

Color

Color is acceptable, but if the publication will be in a print volume, all material will be printed in black and white. It is best to:

- Avoid light colors such as yellow, light blue, light green and pink.
- Delineation between plots in a graph should be indicated by type of symbol and/or line pattern; avoid color graphs where delineation between plots is indicated by color alone.

Layout

Single line spacing is preferred; however, if your manuscript contains a large number of subscripts or superscripts, and you cannot adjust the sizes or positions of these "scripts," use space-and-a-half indexing to eliminate overlaps, as seen in the following example:

> "…activation energies for the stage III recovery were observed with increasing dose depending on the magnitude of the activation energies of vacancies, EMV, , self-insterstitials, E M I, and divacancies, E^{M}_{2V}, for the various metals…"

Use SI units for consistent measurement references. When possible, justify right margins as well as the left for a more finished appearance.

First Page

The top of the first page of your paper contains the title of your paper along with all the author(s) name(s), author(s) affiliation(s), and a list of keywords – blank lines should separate each of these sections. After this information is set, please beginning typing your paper below the keywords (note: even if your **Abstract** ends on the first page, you may begin typing your **Introduction** immediately afterwards).

Title. Enter the title of the paper. The title should be 11 pt. (12 pt. for LaTeX users), bold, centered, and in all caps (use lower-case letters where needed for element abbreviations, acronyms, etc.)

Author(s). If there is more than one author, subsequent author names should follow on the same line as the first author listed, continuing onto further lines as necessary. If the different authors also have different affiliations, there should be a superscript number following each author name that corresponds to the proper affiliation. Each author affiliation should be put on a separate line (multiple lines as needed), with a superscript number at the beginning that corresponds to the correct author(s) in the previous section.

Keywords. Please enter at least three appropriate keywords and leave a blank line before beginning the rest of the paper.

A suitably divided text enables easier reading. These are the standards for two-column proceeding headings:

- First-level subheadings: 9 pt. (10 pt. for LaTeX users), bold, centered on a separate line, first letter of each word capitalized
- Second-level subheadings: 9 pt. (10 pt. for LaTeX users), underlined, flush left on a separate line, first letter of each word capitalized
- Third and subsequent-level subheadings: 9 pt. (10 pt. for LaTeX users), underlined, flush left but run as part of paragraph, first letter of each word capitalized

Equations

All equations should be typed, centered, and separated from the text by one blank line of space above and below. They should be numbered consecutively in parentheses at the right-hand margin, in line with the last line of the equation as seen in the example below.

$$CN + SO_2 + O_2 + H_2O - CNO + H_2SO_4 \qquad (1)$$
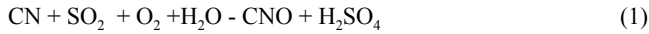
Tables

Place tables as closely as possible to their references. Number consecutively with Roman numerals and center the title above the table. Tablewidth rules should separate the title from column headings, column headings from the table body, and finally the bottom of the table from the next paragraph. Footnotes would appear below the last line. (See Table I).

Table I. Location and Distribution of
World Strip Casting Operations

Location	Number	Percent
North America	58	37
Western Europe	37	23
Eastern Block	29	18
Asia	18	11
Africa	9	6
South America	7	4
Australia	2	1

*Footnotes

If a table cannot be contained in the margins of the template, place the table vertically (sideways) for better treatment of the information. This is an exclusive treatment for table placement and no other text should appear on this page.

Figures

Original figures in your paper should be consecutively numbered with Arabic numerals and each figure should be captioned. As with tables, figures should be placed as closely as possible to the appropriate text. At an absolute minimum, graphic images (halftones) should be set at 300 dots per inch. Photocopies, or items from previously printed sources should be avoided since they reproduce poorly and any potential value is negated. If your figures must be reduced before inserting on the page, be sure not to reduce the caption. When presenting microstructures, be sure to place a scale marker on the photograph. (see Figures 1 and 2)
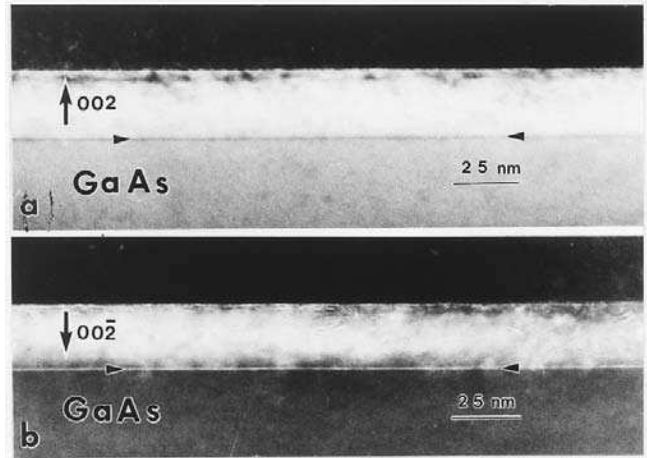

Figure 1. TEM (110) cross sections of (a) 002 and (b) 002 dark field images from a sample with 1 min Zn exposure of a As-stabilized GaAs-(2×4) epilayer prior to the growth of the thin ZnSe Layer. The Zn-As interfacial layer is marked by arrowheads.
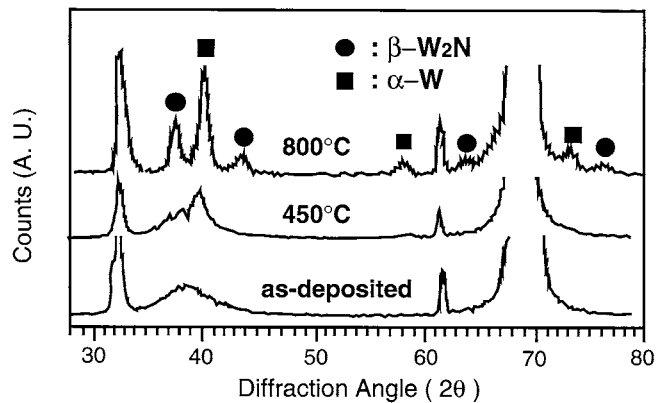

Figure 2. X-ray diffraction spectra of
as-deposited and annealed films.

References

All text references should be consecutively numbered parenthetically, using square brackets with the period after the reference – example [1, 2]. Complete citations should appear at the end of the paper in the **References** section, using single-spaced format with a blank line of space between items. References should provide readers with enough information to find the cited material. See **Example A** for various reference forms. Any manuscript preparation manual will assist you in handling unique citation situations. Abbreviations of widely-used journals are accepted, but it is best to spell out the titles of foreign and less well-known journals.

Submitting your Manuscript

When you are ready to submit your paper, please make sure that the last name of the primary author is used as the filename and then:

1. Go to the ProgramMaster web site and log in using the same username and password that were used when you submitted your abstract.
2. Follow the "Presenter/Author Tools" link from the main menu.
3. In the list that you are presented, click on the "Upload Manuscript" link.
4. From the Manuscript Submission page, follow the prompts on how to upload your file.
5. You can submit either the original source file (such as a Word document), or a PDF version. If you are submitting a PDF file, please be sure that all fonts are embedded within the file.

Copyright Form

A copyright form must be submitted at the time you upload your manuscript. This statement, which transfers copyright from the author(s) or their employers to TMS must be submitted before the manuscript can be accepted for publication. Such a written transfer of copyright is necessary under U.S. Copyright Law in order for TMS to grant permissions to reprint from TMS published volumes.

Example A: References

BOOK

One Author
1. Robert D. Pehlke, *Unit Processes of Extractive Metallurgy* (New York, NY: American Elsevier Publishing Company, 1973), 175-199.

Two or three authors
2. Ulrich Rembold, Karl Armbruster, and Wolfgang Ulzmann, *Interface Technology for Computer-Controlled Manufacturing Processes* (New York, NY: Marcell Dekker, Inc., 1985), 103.

More than three authors
3. R.L. Gibbey et al., *Fast Breeder Reactor Fuel Performance* (LaGrange Park, IL: American Nuclear Society, 1979), 188.

Editor, compiler, translator
4. Lawrence E. Murr, ed., *Industrial Materials Science and Engineering* (New York, NY: Marcel Dekker, Inc. 1985), 98.

5. Robert C. Bates. "A Model for Striation Spacing in Fatigue Crack Growth," *Fracture: Interactions of Microstructure, Mechanisms and Mechanics*, ed. J.M. Wells and J.D. Landes (Warrendale, PA: The Metallurgical Society of AIME, 1984), 255-284.

Multivolume work or series
6. H. Baker et al., eds., Metals Handbook, vol. 2 (Metals Park, OH: American Society for Metals, 1979), 60.

JOURNAL

Volume and year
7. E.H. Lee, R.L. Mallet, and W.H. Yang, "Stress and Deformation Analysis of the Metal Extrusion Process," *Computer Methods in Applied Mechanics and Engineering*, 10 (1977), 339-353.

Volume, issue and year
8. M.J. Cooke et al., "LPCVD of aluminum and Al-Si Alloys for Semiconductor Metallization," *Solid State Tech*, 25 (12) (1982), 62-65.

9. B.L. Agarwal, "Postbuckling Behavior of Composite Shear Webs," *A.I.A.A. Journal*, 19 (F) (1981), 933-939.

Year as volume number
10. A.H. Cottrell and P.R. Swann, "Technical Lessons for Flixborough, A Metallurgical Examination of the Eight-Inch Line," *The Chemical Engineer*, 1979, no. 4:266-274.

UNPUBLISHED PAPERS

Reports
11. D.N. Robinson, "A Unified Creep-Plasticity Model for Structural Metals at High Temperature" (Report ORNL/TM-5969, Oak Ridge National Laboratory, 1978).

Dissertation or thesis
12. B.G. Snyder, "Superplasticity in Ferrous Laminated Composites" (Ph.D. thesis, Stanford University, 1982), 45-51.

Paper presented at meeting
13. P.B. Queneau, "Behavior of Magnesium Sulfate During Acid Pressure Leaching Nickeliferous Laterite Ore" (Paper presented at the 113th AIME Annual Meeting, Los Angeles, California, 28 February 1984), 5.

Interview of personal communication
14. James F. Rogers, private communication with author, U.S. Naval Research Laboratory, 10 September 1978.

Page Size: 51 x 66 picas; 8.5 x 11 inches; 215.9 x 279.4 mm

Top Margin: 6 picas; 1 inch; 25.4 mm

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54 picas; 9 inches; 228.6 mm

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PAPER TITLE

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[1]Authors(s) Affiliation(s) (Name of Company; Complete Address)
[2]Authors(s) Affiliation(s) (Name of Company; Complete Address)

Keywords: Keyword, Keyword, Keyword

Paper title, author(s) name(s), author(s) affiliation(s), and keywords appear on first page only

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