

## Materials Science & Technology Conference Proceedings: Word Template

ACerS<sup>1</sup>, AIST<sup>2</sup>, ASM<sup>3</sup>, TMS<sup>4</sup>

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Keywords: Enter Keywords...

### Abstract

This document contains instructions and also serves as a sample file for the **Materials Science & Technology (MS&T) Conference** Microsoft Word Template. This template has a preset formatting structure and contains some Macro buttons to help with preparation of your paper. When you are ready to submit:

1. Go to the *CMS-Plus* web site (<http://cmsplus.tms.org>) 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.

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.

### Introduction

The template has the proper margins set, includes some styles specifically designed for **MS&T**, and includes a few buttons to help automate some common tasks. The margins and styles should remain constant for whatever version of Word you are using and whether you are using a Windows or Macintosh computer. But, please note that the buttons use Macros that will work only in Word ‘97 and subsequent versions.

If you have any questions concerning the Word template, please contact:

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## Layout

The paper size and margins for the template are setup according to the following table. Please do not make any changes and be sure that everything in your paper (included all tables, artwork, etc.) is within these the margins.

Dimension for Page Setup				
Dimensions	Inches Decimal	Points	Picas	Millimeters
Page Size:	8.5 x 11	612 x 792	51 x 66	215.9 x 279.4
Margins:	Left: .75	54	4p6	19.05
	Right: .75	54	4p6	19.05
	Top: .5	36	3	12.7
	Bottom: 1	72	6	25.4
Live Area:	7 x 9.5	504 x 684	42 x 57	177.8 x 241.3

## First Page

The top of the first page of your paper contains the Title Page Copyright Information (TPCI), the title of your paper, author list, author affiliation(s), and keywords. After this information is set, please beginning typing your paper below the keywords.

### TPCI

The very top of the first page – flush right – contains generic TPCI. This is resident in the template to ensure that the necessary space for the TPCI is set aside. After your paper is submitted, MS&T Staff will input the proper TPCI for your specific publication.

### Title and Author(s)

Click on the text “Materials Science & Technology Conference Proceedings: Word Template” and then type the title of your paper. After typing in the title, please follow the same procedure for clicking on and typing in the author list and author affiliation(s). If there is more than one author, subsequent author names should follow on the same line as the first author mentioned, 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. There should be a blank line between the author list and affiliation(s). Each 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).

### Keywords

2 lines below the author affiliation(s), please enter at least 3 appropriate keywords for your paper. These will be used for preparing the Subject Index for the proceedings.

## Figures

There are two types of figures you may work with on your paper: “line-art” (spot graphs, bar graphs, etc.) and “photo-images” (micrographs, photos, etc.). The figures in your paper will need to comply with specific resolutions, or “dots-per-inch” (dpi) in order to look acceptable in print.

- Photo-images must be at least 300 dpi (minimum); dpi less than 300 will result in washed-out and/or blurred images when printed.
- Line-art must be at least 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 print product; avoid using images pulled from web-based material.
- Photocopies, or items from previously printed sources should be avoided since they reproduce poorly and any potential value is negated.
- Make sure all type in graphs and figures is large enough to read and understand.

Color IS acceptable, BUT will be printed in black and white, so...

- 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.

Figures should be consecutively numbered with Arabic numerals and each figure should be captioned. Figures should be placed as closely as possible to the appropriate text. If your figures must be reduced before inserting on the page, be sure that the caption is still set in a 12 pt. font. When presenting microstructures, be sure to place a scale marker on the photograph. (see Figures 1 and 2)

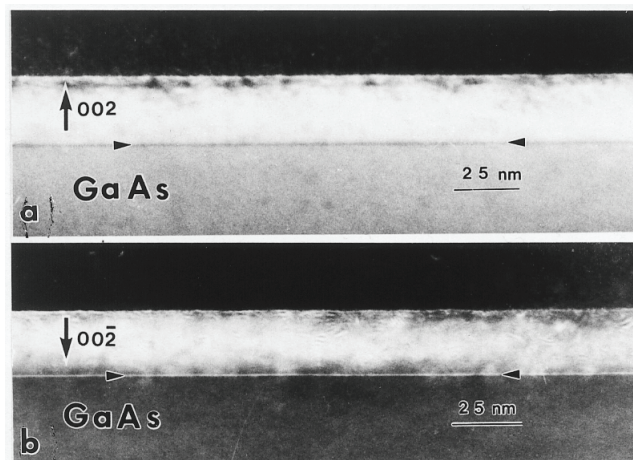


Figure 1: TEM (110) cross sections of (a) 002 and (b)  $00\bar{2}$  dark field images from a sample with 1 min Zn exposure of a As-stabilized GaAs-(2×4) epilayer prior to the growth of the thin ZnSe Layer. The Zn-As interfacial layer is marked by arrowheads.

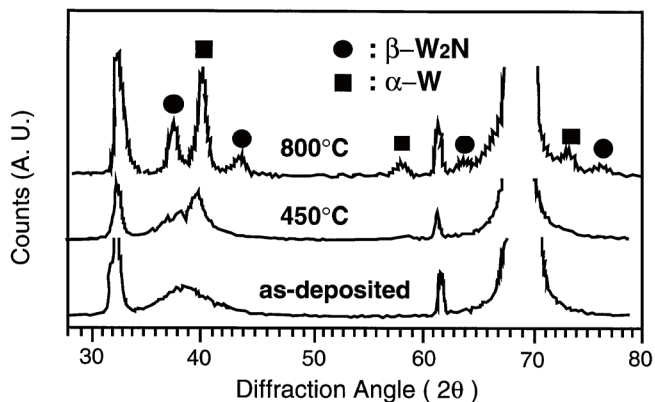


Figure 2: X-ray diffraction spectra of as-deposited and annealed films.

## Styles

This template has certain character/paragraph styles predefined. The proper style is already set for when you type in the following components:

- author list
- author affiliation(s)
- abstract
- introduction

As you add in more headings and paragraphs, you will need to make sure that the new text receives the proper formatting style and the toolbars described later can help with this process. The size of your typeface should be set at 12 points with ~14 point leading. The typeface should be a 12 point (~14 point leading) serif font (such as the Times family of fonts). Keep all text and artwork within the template margins. All papers should be 8-12 pages in length; you can reduce the font size to 10 points if necessary to comply with the page limit.

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

**IMPORTANT NOTE:** If you have typed your paper in another software application and are pasting it into this template, Word usually attempts to retain the original formatting style. So, once the text is pasted in, you will need to apply the proper **MS&T** style.

### **Heading 1, MS&T: First-Level Heading**

This style should be used for any first level headings such as the “Abstract” and “Introduction” portions of your paper.

### **Heading 2, MS&T: Second-Level Heading**

This style should be used for any second level headings. An example would be “Heading 2, MS&T: Second-Level Heading” above.

**Heading 3, MS&T: Third-Level Heading.** If necessary, this style should be used for any third (and subsequent) level headings. It is almost identical to the second level heading except that a second level paragraph begins 2 lines below the heading whereas the third level paragraph begins on the same line, immediately following the heading.

### **Heading 4, MS&T: Paper Title**

This style should be used for the paper title only.

MS&T: Paragraph Style. This style should be used for the main text in the body of each paragraph.

MS&T: Σψμβολ. This is the “Symbol” font; please use this whenever possible when inserting special characters.

### **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.



### **Tables**

As with Figures, tables should be placed as closely as possible to their references. Number consecutively with Roman numerals and center the title above the table. (See following example).

<b>Table IV. Location and Distribution of World Strip Casting Operations</b>		
<b>Location</b>	<b>Number</b>	<b>Percent</b>
North America	58	37
Western Europe	37	23
Eastern Block	29	18
Asia	18	11
Africa	9	6
South America	7	2
Australia	2	2
*Footnotes		

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

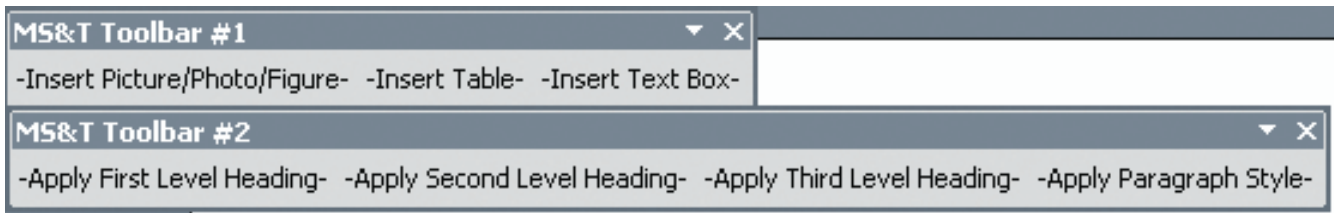
**TABLE III. -X-RAY DIFFRACTION RESULTS FOR HIPPED -NiAl ALLOYS TESTED FOR 1-HR EXPOSURE CYCLES IN STATIC AIR AT 1200°C**

[Phases listed in decreasing order of intensity. Code: A = Al<sub>2</sub>O<sub>3</sub>; Z = ZrO<sub>2</sub>; S = Nickel aluminate spinel; a = 8.05 to 8.10 Å; N = NiO; -NiAl matrix as weakest surface phase under oxides. The oxide surface phases present at various times, hr.]

Alloy	Run	Oxide surface phases present at various times, hr								Spall - when observed
		100	200	500	1000	1500	2000	2500	3000	
Alloy 1 Ni-46.6%Al-0.1%Zr	683-4	A	A	A	A <sup>a</sup>	A,S,N <sup>b</sup>	A,S <sup>c</sup>	S,N,A <sup>d</sup>		2000 hr - A,S 2500 hr - N,S,A
	683-5	A	A	A	A <sup>a</sup>	A,S,N <sup>b</sup>	A,S <sup>c</sup>	S,N,A <sup>d</sup>		2000 hr - A,S 2500 hr - N,S,A
Alloy 2 Ni-48.3%Al-0.1%Zr	683-2	A	A,Z	A,Z	A,Z	A,Z	A,Z	A,Z		1500 hr - A 2000 hr - A,S,Z 2500 hr - A,Z,S
Alloy 3 Ni-38.1%Al-0.1%Z	683-3	A	A,Z	A,Z,S	A,Z	A,Z,S	A,S,Z	A,Z,S		1500 hr - A 2000 hr - A,S,Z 2500 hr - A
	683-6	A	A,Z	A,Z,S	A,Z	A,Z,S	A,Z,S <sup>b</sup>	A,Z,S		1500 hr - A 2000 hr - A,S,Z 2500 hr - N,S,A

<sup>a</sup> Martensitic β-NiAl under scale  
<sup>b</sup> β-NiAl and γ'Ni under scale  
<sup>c</sup> γ'Ni- under scale  
<sup>d</sup> γ'Ni and β-NiAl under scale

## Buttons



This template contains two toolbars (see example above). “MS&T Toolbar #1” contains the following buttons:

- Insert Picture/Photo/Figure
- Insert Table
- Insert Text Box

“MS&T Toolbar #2” contains the following buttons:

- Apply First Level Heading
- Apply Second Level Heading
- Apply Third Level Heading
- Apply Paragraph Style

### Using Buttons

In order for the buttons to work, the security settings for Word must be set properly to allow Macros to run. This is done by going to the following menu:

– “Tools” – “Macros” – “Security”

To use the buttons, set the security to either “Medium” or “Low.” If you set the security to “Low” then the buttons will work; if you set the security to “Medium” when you launch the template, you will be prompted to either enable or disable macros – choose “Enable Macros” if you want the buttons to function.

### “Insert” Buttons

These buttons (Insert Picture/Photo/Figure, Insert Table and Insert Text Box) are resident in the toolbar because they are commonly used tasks when preparing technical papers. Whenever inserting any object, be sure that the object is kept within the margins of the paper.

When you click on the “Insert Picture\Photo\Figure” button, the cursor will first be centered, and then you will be taken to the appropriate dialog box. You can save items such as graphs and equations as graphic files and use this button to insert them into the document – thus ensuring that they look correct and no information is lost or changed the preferred file formats for any graphics are either EPS for TIFF).

### “Apply...” Buttons

These buttons are resident in the toolbar to help automate applying the correct styles to text. Highlight the text you wish to change and then click on the appropriate button to apply the proper style.

## Copyright Form

This statement, which transfers copyright from the author(s) or their employers to **MS&T** must be submitted before the manuscript can be accepted for publication. Such a written transfer of copyright is necessary under U.S. Copyright Law.

### 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 a single-spaced format with an extra, blank line of space between items. References should provide readers with enough information to find the cited material. See following examples 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.

### **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.