



Guide to MSSA abstracts

Johan Westraadt and Jaco Olivier

Centre for High Resolution TEM, NMU

Abstracts are returned because...

- The content is unacceptable
 - No order, poor spelling, illogical, unscientific, incomplete, incomprehensible
- The format is incorrect
 - Does not follow instructions given to authors

Scientific organization

- Four distinct components of the abstract:
 - What was the problem?
 - Introduction
 - How did you study the problem?
 - Methods and materials
 - What did you find?
 - Results
 - What do these findings mean?
 - Discussion

Introduction

- Supply sufficient background information to allow the reader to:
 - Understand the rationale of the study
 - Evaluate previous results without having to refer to other publications
 - Clearly define aim

Introduction

The use of galvanised coatings on steel wire for structural ropes and cables has become standard practice as unprotected steel is prone to corrosion degradation. Galvanised coatings increase service lifespan by providing barrier and cathodic corrosion protection to the underlying steel¹. Zinc (Zn) and zinc-aluminium (Zn-Al) alloys¹ are the most commonly used metallic coatings on steel wire. Zn-Al coatings outperform Zn coatings, most notably in marine environments, as they combine the highly insulating oxide film associated with Al corrosion and the cathodic protection of Zn to the underlying steel².

In this study, the corrosion of Zn-10Al (10% weight Al content) alloy coating on low carbon steel wire is investigated. Accelerated corrosion tests are performed in order to understand and quantify the mechanism by which such corrosion occurs.

Rationale of the study

Clearly defined aim

Methods

- How the study was carried out
- Three main points of interest:
 - Subjects
 - What were they?
 - How many?
 - How were they selected?
 - Apparatus
 - Equipment
 - Reagents
 - Procedure
 - Specimen preparation
 - Measurements taken
 - Data collection
 - Statistical manipulation

Methods

Subjects

Samples of 3mm diameter low carbon steel wire coated with 300g/m^2 of Zn-10Al were subjected to 2,016hrs of the ASTM B117 salt spray test³. These experiments were conducted in a Q-FOG cyclic corrosion tester. Corrosion products were removed from the surface of the samples at the end of the salt spray test, after which samples were sectioned, mounted and polished for metallography. Microstructural evaluations of the Zn-10Al coating before and after the salt spray test were performed using scanning electron microscopy (SEM) in a Nova NanoSEM 230 using the backscattered electron (BSE) detector.

Procedures

Apparatus

Results

- Presents the findings
- Draws attention to the points of interest
- Displays summarised and analysed data
 - Micrographs, table, graphs, stats
 - Be sure that these are correctly labelled and identified

Results

Displays analysed data

Draws attention to the points of interest

The BSE image in Fig. 1 reveals the nature of the Zn-10Al microstructure. The microstructure consists of a mixture of β (Al-rich) and η (Zn-rich) phases, represented by dark and light regions respectively, as determined by energy dispersive spectroscopy in the SEM. A distinct intermetallic layer of Fe-Zn-Al (A) was observed between the low carbon steel wire (B) and the Zn-10Al coating. Numerous cracks were observed within the Zn-10Al coating after the ASTM B117 salt spray test as shown in Fig. 2. These cracks are a clear indication of corrosion damage to the coating.

Discussion

- Discuss results in context of aims
 - Did you find what you expected?
 - Compare results with previous studies?
 - Why were your results un/expected?
- Avoid unimportant, unconstructive and negative arguments

Conclusion

- Main findings summarised
- Suggestions made for further research

Discussion and Conclusion

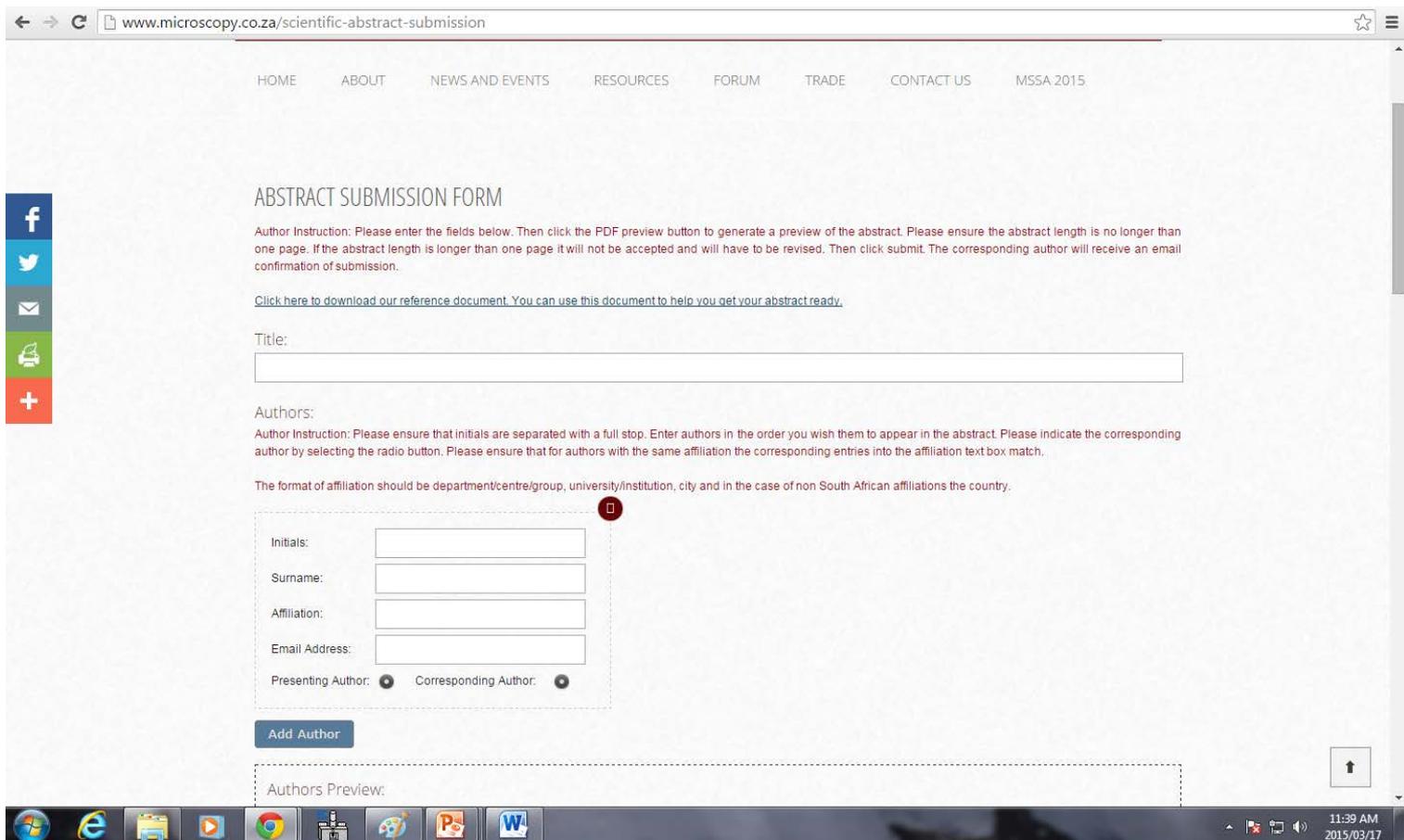
Explaining the results

Conclusion

A potential difference exists between β (Al-rich) and η (Zn-rich) phases in the Zn-10Al coating⁴. This leads to preferential corrosion of the η (Zn-rich) phase along grain boundaries of η (Zn-rich) primary crystals and β (Al-rich) primary crystals when the coating is exposed to a corrosive environment^{4,5}. The extensive crack formation can possibly be explained by the volume expansion arising from the internal corrosion products. Consequently, it may be concluded that although Al enhances the outer oxide layer protection, the microgalvanic effect associated with the two-phase microstructure can accelerate corrosion in harsh environments.

Submitting the abstract

An online form has been created for submission of abstracts to ensure correct formatting



The screenshot shows a web browser window with the URL www.microscopy.co.za/scientific-abstract-submission. The page features a navigation menu with links for HOME, ABOUT, NEWS AND EVENTS, RESOURCES, FORUM, TRADE, CONTACT US, and MSSA 2015. On the left side, there is a vertical social media sharing bar with icons for Facebook, Twitter, Email, Print, and a plus sign for more options.

ABSTRACT SUBMISSION FORM

Author Instruction: Please enter the fields below. Then click the PDF preview button to generate a preview of the abstract. Please ensure the abstract length is no longer than one page. If the abstract length is longer than one page it will not be accepted and will have to be revised. Then click submit. The corresponding author will receive an email confirmation of submission.

[Click here to download our reference document. You can use this document to help you get your abstract ready.](#)

Title:

Authors:

Author Instruction: Please ensure that initials are separated with a full stop. Enter authors in the order you wish them to appear in the abstract. Please indicate the corresponding author by selecting the radio button. Please ensure that for authors with the same affiliation the corresponding entries into the affiliation text box match.

The format of affiliation should be department/centre/group, university/institution, city and in the case of non South African affiliations the country.

Initials:

Surname:

Affiliation:

Email Address:

Presenting Author: Corresponding Author:

Authors Preview:

The bottom of the browser window shows the Windows taskbar with various application icons and a system tray displaying the time as 11:39 AM on 2015/03/17.

Preparation

- The MS Word example can be used as a template to “copy and paste” your information into the online submission form if you wish to do so. This way you are assured that the page setup will be correct.
- The abstract must fit on **ONE PAGE ONLY**.
- The online form will display a pdf preview of your submission before submitting to ensure that everything fits onto one page when in the correct format

Online submission - Title

ABSTRACT SUBMISSION FORM

Author Instruction: Please enter the fields below. Then click the PDF preview button to generate a preview of the abstract. Please ensure the abstract length is no longer than one page. If the abstract length is longer than one page it will not be accepted and will have to be revised. Then click submit. The corresponding author will receive an email confirmation of submission.

[Click here to download our reference document. You can use this document to help you get your abstract ready.](#)

Title:

TITLE GOES HERE USING TIMES ROMAN BOLD CAPITAL LETTERS - MAXIMUM 14 WORDS, CENTRED

Authors:

Author Instruction: Please ensure that initials are separated with a full stop. Enter authors in the order you wish them to appear in the abstract. Please indicate the corresponding author by selecting the radio button. Please ensure that for authors with the same affiliation the corresponding entries into the affiliation text box match.

- Enter the title of your abstract here. Maximum of 14 words. Please ensure that if any special characters are entered that they are correct. A toolbox will appear to allow for the inserting of special characters if needed.

Online submission - Authors

- Add the authors of the abstract

Delete authors here

Authors:

Author Instruction: Please ensure that initials are separated with a full stop. Enter authors in the order you wish them to appear in the abstract. Please indicate the corresponding author by selecting the radio button. Please ensure that for authors with the same affiliation the corresponding entries into the affiliation text box match.

The format of affiliation should be department/centre/group, university/institution, city and in the case of non South African affiliations the country

| | | | |
|-----------------------|-----------------------------------------------------------------------|-----------------------|----------------------------------------------------------------------|
| Initials: | <input type="text" value="O.N.E."/> | Initials: | <input type="text" value="A.N."/> |
| Surname: | <input type="text" value="Writer"/> | Surname: | <input type="text" value="Other"/> |
| Affiliation: | <input type="text" value="Unit for Microscopy, University of Abrac"/> | Affiliation: | <input type="text" value="Dept. of Anatomy, University of Marvelk"/> |
| Email Address: | <input type="text" value="email@author.com"/> | Email Address: | <input type="text" value="email2@author.com"/> |
| Presenting Author: | <input checked="" type="radio"/> | Presenting Author: | <input type="radio"/> |
| Corresponding Author: | <input type="radio"/> | Corresponding Author: | <input checked="" type="radio"/> |

Initials should be separated by a full stop

Indicate Presenting author and Corresponding author using the radio buttons

| | |
|--------------------|---------------------------------------------------------------------------------------|
| Initials: | <input type="text" value="N.R."/> |
| Surname: | <input type="text" value="Three"/> |
| Affiliation: | <input type="text" value="Uni"/> |
| Email Address: | <input type="text" value="Unit for Microscopy, University of Abracadabra, Pretoria"/> |
| Presenting Author: | <input type="text" value="Dept. of Anatomy, University of Marvelloussy, Krakatoa"/> |

When entering affiliation an autocomplete selection will appear based on previously entered affiliations

Add Author

Click here to add author

Authors Preview:

O.N.E. Writer¹, A.N. Other² and N.R. Three³

¹Unit for Microscopy, University of Abracadabra, Pretoria, ²Dept. of Anatomy, University of Marvelloussy, Krakatoa, ³Uni

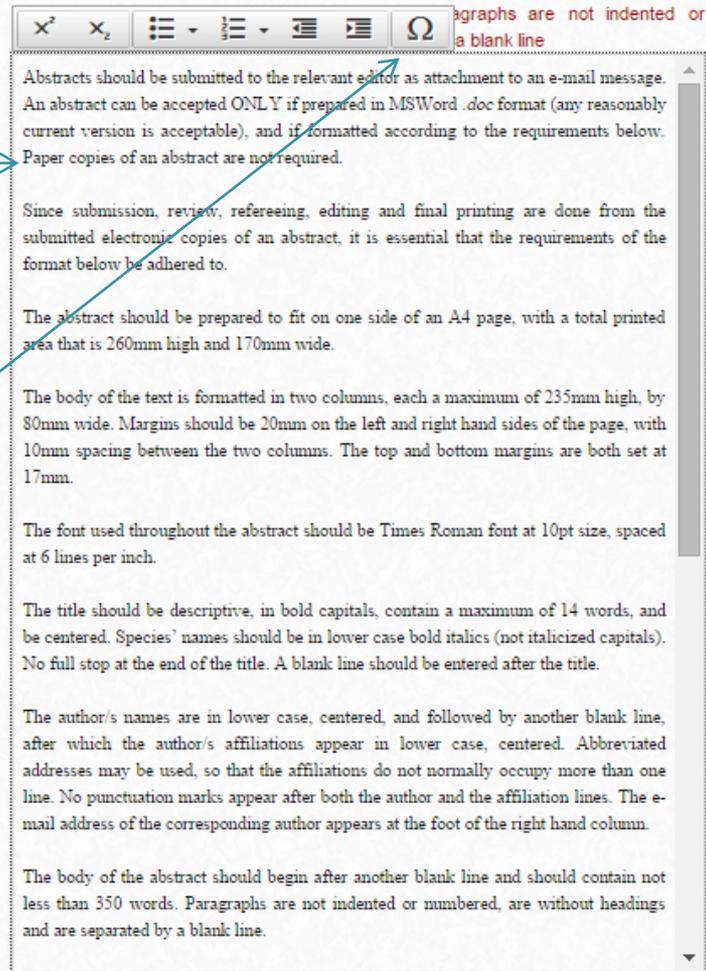
An authors preview is generated here. Please ensure that it is correct and that there are no duplications

Online submissions – Abstract main text

Enter abstract main text here. The main text must contain at least 350 words. If you copy and paste into the text box please ensure that the special characters are transferred correctly

Special characters can be inserted using the toolbar as well as other functions

Abstract main text:



Abstracts should be submitted to the relevant editor as attachment to an e-mail message. An abstract can be accepted ONLY if prepared in MSWord .doc format (any reasonably current version is acceptable), and if formatted according to the requirements below. Paper copies of an abstract are not required.

Since submission, review, refereeing, editing and final printing are done from the submitted electronic copies of an abstract, it is essential that the requirements of the format below be adhered to.

The abstract should be prepared to fit on one side of an A4 page, with a total printed area that is 260mm high and 170mm wide.

The body of the text is formatted in two columns, each a maximum of 235mm high, by 80mm wide. Margins should be 20mm on the left and right hand sides of the page, with 10mm spacing between the two columns. The top and bottom margins are both set at 17mm.

The font used throughout the abstract should be Times Roman font at 10pt size, spaced at 6 lines per inch.

The title should be descriptive, in bold capitals, contain a maximum of 14 words, and be centered. Species' names should be in lower case bold italics (not italicized capitals). No full stop at the end of the title. A blank line should be entered after the title.

The author/s names are in lower case, centered, and followed by another blank line, after which the author/s affiliations appear in lower case, centered. Abbreviated addresses may be used, so that the affiliations do not normally occupy more than one line. No punctuation marks appear after both the author and the affiliation lines. The e-mail address of the corresponding author appears at the foot of the right hand column.

The body of the abstract should begin after another blank line and should contain not less than 350 words. Paragraphs are not indented or numbered, are without headings and are separated by a blank line.

3586 of 3000 characters

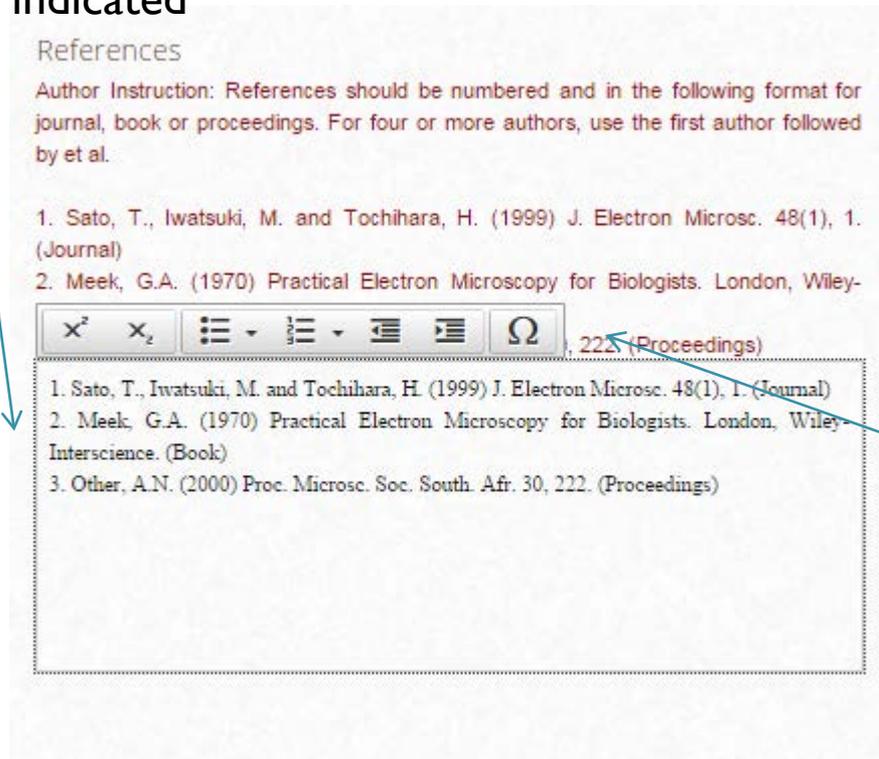
Online submission - References

- Enter references in the text box
- References should be numbered and in the format indicated

References

Author Instruction: References should be numbered and in the following format for journal, book or proceedings. For four or more authors, use the first author followed by et al.

1. Sato, T., Iwatsuki, M. and Tochihara, H. (1999) J. Electron Microsc. 48(1), 1. (Journal)
2. Meek, G.A. (1970) Practical Electron Microscopy for Biologists. London, Wiley-Interscience. (Book)
3. Other, A.N. (2000) Proc. Microsc. Soc. South. Afr. 30, 222. (Proceedings)



The screenshot shows a text editor interface for entering references. At the top, there is a heading 'References' and an 'Author Instruction' in red text: 'References should be numbered and in the following format for journal, book or proceedings. For four or more authors, use the first author followed by et al.' Below this, a list of three references is shown. The first two are already entered: '1. Sato, T., Iwatsuki, M. and Tochihara, H. (1999) J. Electron Microsc. 48(1), 1. (Journal)' and '2. Meek, G.A. (1970) Practical Electron Microscopy for Biologists. London, Wiley-Interscience. (Book)'. The third reference is partially entered: '3. Other, A.N. (2000) Proc. Microsc. Soc. South. Afr. 30, 222. (Proceedings)'. A toolbar is visible above the third reference, containing icons for mathematical symbols (x², x₂), list creation (bulleted, numbered), alignment (left, right, center), and a special character symbol (Ω). A blue arrow points from the text 'Special characters can be inserted using the toolbar as well as other functions' to the Ω icon in the toolbar. Another blue arrow points from the text 'References should be numbered and in the following format...' to the first reference entry.

Special characters can be inserted using the toolbar as well as other functions

References

- Journal publication
 - Template:
 - Writer, A., Second, O.N.E and Last, O.N.E. (YEAR) Title of the Journal vol(issue), page.
 - Example:
 - Sato, T., Iwatsuki, M. and Tochihara, H. (1999) J. Electron Microsc. 48(1), 1.

References

- **Book**

- **Template:**

- Author, T.H.E. (YEAR) The title goes here.
Place, Publisher.

- **Example:**

- Meek, G.A. (1970) Practical Electron
Microscopy for Biologists. London, Wiley-
Interscience.

References

- Proceedings

- Template:

- Author, A.N. (YEAR) Conference vol, page.

- Example:

- Other, A.N. (2000) Proc. Microsc. Soc. South. Afr. 30, 222.

Online submission - Images

Figures:

Author Instruction: Upload a minimum of 1 and maximum of 3 figures. Before inserting an image, it is strongly advised that it be sized to 80mm wide, at a final resolution of approximately 300dpi, and saved in JPG format. This formatting can be done in most graphics software packages. Inserted images in colour and in monochrome exhibit more than adequate detail and resolution at the required 80mm single-column size after JPG-compression to approximately 150kb size. Please do not insert individual images that are much larger than this.

Both images and tables should be uploaded as a figure

Figures must have a width greater than 347px.

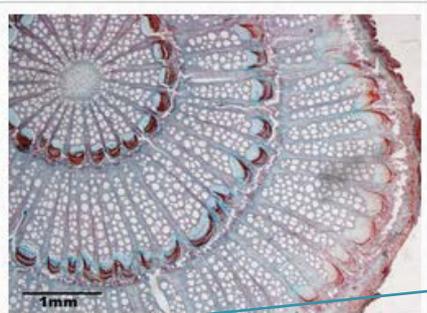
Please select Figures to upload (JPG).

Maximum file size: 1MB. Maximum Figures: 3.

No file chosen

Click here to upload your figures

Uploaded Images



A preview of the image will appear



Press here to delete a figure

Caption:

Transverse section of a liana stem with concentric rings of vascular bundles

- Enter the figure caption here
- Enter only the caption
- No figure numbering

76 of 300 characters

Online submission – PDF preview

Programme Questionnaire:

Title of corresponding author:

Address of author to whom correspondence should be sent:

Postcode:

Telephone Number:

Fax Number:

Programme Information: Paper Poster

Information for Prizes (please tick appropriate option)

Yes No

1. Is this an innovative technique?

2. Have you developed this technique?

3. Is the senior author a registered student and under the age of 35 on 31 July 2019?

PDF preview

- After completing the programme questionnaire click PDF preview to generate a preview of your abstract
- If all the relevant fields were entered correctly a PDF preview of your abstract will appear
- Otherwise an error message will appear

Online submission – PDF Preview

- Please ensure that all required information is on the abstract.
- Please note the abstract is limited to one page. Ensure that everything fits on to one page otherwise it will be sent back for revision
- If you wish to edit the abstract press **Back**
- If you want to submit press **Submit Abstract**
- After submission a confirmation email will be sent to the corresponding author email

PREVIEW ABSTRACT

Please ensure that all required information is on this abstract. Please note the abstract is limited to 1 page.

TITLE GOES HERE USING TIMES ROMAN BOLD CAPITAL LETTERS - MAXIMUM 14 WORDS, CENTRED

O.N.E. Winter¹, A.N. Other² and N.R. Three³

¹Unit for Microscopy, University of Abroadaba, Pretoria, ²Dept. of Anatomy, University of Marvellousay, Krakason

Abstracts should be submitted to the relevant editor as attachments to an e-mail message. An abstract can be accepted **ONLY** if prepared in MSWord .doc format (any reasonably current version is acceptable), and if formatted according to the requirements below. Paper copies of an abstract are not required.

Since submission, review, refereeing, editing and final printing are done from the submitted electronic copies of an abstract, it is essential that the requirements of the format below be adhered to.

The abstract should be prepared to fit on one side of an A4 page, with a total printed area that is 260mm high and 170mm wide.

The body of the text is formatted in two columns, each a maximum of 235mm high, by 80mm wide. Margins should be 20mm on the left and right hand sides of the page, with 10mm spacing between the two columns. The top and bottom margins are both set at 17mm.

The font used throughout the abstract should be Times Roman font at 10pt size, spaced at 6 lines per inch.

The title should be descriptive, in bold capitals, contain a maximum of 14 words, and be centered. Species' names should be in lower case bold italics (not italicized capitals). No full stop at the end of the title. A blank line should be entered after the title.

The author's names are in lower case, centered, and followed by another blank line, after which the author's affiliations appear in lower case, centered. Abbreviated addresses may be used, so that the affiliations do not normally occupy more than one line. No punctuation marks appear after both the author and the affiliation lines. The e-mail address of the corresponding author appears at the foot of the right hand column.

The body of the abstract should begin after another blank line and should contain not less than 350 words. Paragraphs are not indented or numbered, are without headings and are separated by a blank line.

The text should describe the aim of the work and should provide a brief introduction, sufficient to orientate the non-specialist reader. A brief description of the techniques employed, a discussion of the results, and a mention of the most important conclusions should follow this.

The left hand column should contain text only; the right hand column may contain text, and/or tables and/or figures and references.

All figures should be referred to in the text (Fig. 1), should have brief but clear captions, and should be provided with a scale bar, the dimensions of which may be defined either in the figure or in the caption.

Micrographs and other figures should be inserted in the text in their final positions. Before inserting an image, it is strongly advised that it be sized to 80mm wide, at a final resolution of approximately 300dpi, and saved in JPG format. This formatting can be done in most graphics software packages. Inserted images in colour and in monochrome exhibit more than adequate detail and resolution at the required 80mm single-column size after JPG-compression to approximately 150kb size. Please do not insert individual images that are much larger than this. There is little justification for an abstract to be much larger than 700kb. Please feel free to contact the editor-in-chief if the above requirements are onerous in any specific case. The above size constraints are suggested in the interest of limiting the required e-mail bandwidth.

Literature citations are by means of superscript numbers³.

Literature references should follow one double space below the text under the heading "References". For four or more authors, use the first author followed by et al.

Reference:
1. Sato, T., Iwatsuki, M. and Tochihana, H. (1999) *J. Electron Microsc.* 48(1), 1. (Journal)
2. Meek, G.A. (1970) *Practical Electron Microscopy for Biologists*. London, Wiley-Interscience. (Book)
3. Other, A.N. (2000) *Proc. Microsc. Soc. South Afr.* 30, 222. (Proceedings)



Figure 1. Transverse section of a lily stem with concentric rings of vascular bundles

Corresponding author: email2@author.com

Back **Submit Abstract**

Confirmation email

Micrographs and other figures should be inserted in the text in their final positions. Before inserting an image, it is strongly advised that it be sized to 80mm wide, at a final resolution of approximately 300dpi, and saved in JPG format. This formatting can be done in most graphics software packages. Inserted images in colour and in monochrome exhibit more than adequate detail and resolution at the required 80mm single-column size after JPG-compression to approximately 1MB size. Please do not insert individual images that are much larger than this. There is little justification for an abstract to be much larger than 700kb. Please feel free to contact the editor-in-chief if the above requirements are onerous in any specific case. The above size constraints are suggested in the interests of limiting the required e-mail bandwidth.

Literature citations are by means of superscript numbers¹.

Literature references should follow one double space below the text under the heading "References". For four or more authors, use the first author followed by *et al*.

References:

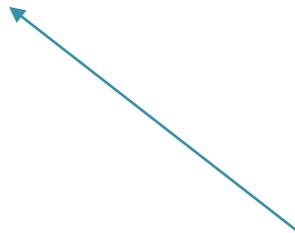
1. Sato, T., Iwatsuki, M. and Tochiwara, H. (1999) *J. Electron Microsc.* **48**(1), 1. (*Journal*)
2. Meek, G.A. (1970) *Practical Electron Microscopy for Biologists*. London, Wiley-Interscience. (*Book*)
3. Other, A.N. (2000) *Proc. Microsc. Soc. South. Afr.* **30**, 222. (*Proceedings*)

[Download PDF:](#)

[Download Word \(docx\):](#)

[Download Questionare:](#)

Resubmission: [Click here](#) to edit or resubmit your abstract.



The confirmation email you receive will include links you can use to view your abstract and to revise your abstract.