



### TABLE OF CONTENTS

---

●	<b>Description</b>	<b>p.1</b>
●	<b>Audience</b>	<b>p.1</b>
●	<b>Impact Factor</b>	<b>p.1</b>
●	<b>Abstracting and Indexing</b>	<b>p.2</b>
●	<b>Editorial Board</b>	<b>p.2</b>
●	<b>Guide for Authors</b>	<b>p.5</b>



ISSN: 0022-0248

### DESCRIPTION

---

The journal offers a common reference and publication source for workers engaged in research on the experimental and theoretical aspects of **crystal growth** and its applications, e.g. in devices. Experimental and theoretical contributions are published in the following fields: theory of nucleation and growth, molecular kinetics and transport phenomena, crystallization in viscous media such as polymers and glasses; crystal growth of metals, minerals, semiconductors, superconductors, magnetics, inorganic, organic and biological substances in bulk or as thin films; molecular beam epitaxy, chemical vapor deposition, growth of III-V and II-VI and other semiconductors; characterization of single crystals by physical and chemical methods; apparatus, instrumentation and techniques for crystal growth, and purification methods; multilayer heterostructures and their characterisation with an emphasis on crystal growth and epitaxial aspects of electronic materials. A special feature of the journal is the periodic inclusion of proceedings of symposia and conferences on relevant aspects of **crystal growth**.

#### Benefits to authors

We also provide many author benefits, such as free PDFs, a liberal copyright policy, special discounts on Elsevier publications and much more. Please click here for more information on our [author services](#).

Please see our [Guide for Authors](#) for information on article submission. If you require any further information or help, please visit our [Support Center](#)

### AUDIENCE

---

Crystal Growers, Crystallographers, Condensed Matter Physicists, Materials Scientists and Solid State Chemists.

### IMPACT FACTOR

---

2016: 1.751 © Clarivate Analytics Journal Citation Reports 2017

## ABSTRACTING AND INDEXING

---

Aluminium Industry Abstracts  
Chemical Abstracts  
Current Contents/Physics, Chemical, & Earth Sciences  
EI Compendex Plus  
Engineered Materials Abstracts  
Engineering Index  
INSPEC  
Metals Abstracts  
Scopus

## EDITORIAL BOARD

---

### **Principal Editor:**

**T.F. Kuech**, Dept. of Chemical and Biological Engineering, University of Wisconsin at Madison, 1415 Engineering Drive, Madison, WI 53706, USA, Fax: +1 608 262 3782

### **Editorial Board:**

**R.S. Feigelson**, Geballe Laboratory for Advanced Materials, McCullough Bldg, Stanford University, 476 Lomita Mall, Stanford, CA 94305-4045, USA, Fax: +1 650 723 3044

**K. Nakajima**, Inst. for Materials Research, Tohoku University, 2-1-1 Katahira, 980-8577, Aoba-ku, Sendai, Japan, Fax: +81 22 215 2006

**G.B. Stringfellow**, College of Engineering, The University of Utah, 50 S. Central Campus Dr., Salt Lake City, UT 84112, USA, Fax: +1 801 581 8692

### **Associate Editors:**

**S. Akamatsu**, Inst. des Nanosciences de Paris, UMR CNRS 7588, Sorbonne Universités, 4 Place Jussieu, 75252, Paris, France

(Solidification, Experimentation)

**H. Asahi**, Inst. of Scientific and Industrial Research, Osaka University, 8-1 Mihogaoka, Ibaraki, 567-0047, Osaka, Japan

(Molecular beam epitaxy)

**R. Bhat**, Painted Post, NY 14870, USA

(Thin film, Epitaxial growth)

**A. Bhattacharya**, Dept. of Condensed Matter Physics and Materials Science, Tata Institute of Fundamental Research, Homi Bhabha Road, Colaba, 400005, Mumbai, India

(Epitaxial growth, Nanowires, Particles and quantum dots, Optoelectronic devices)

**R.M. Biefeld**, Dept. 1126, MS 0601, Sandia National Laboratories, PO Box 5800, Albuquerque, NM 87185-0601, USA

(Epitaxial growth, Nanostructures)

**E. Calleja**, Dept. of Electronic Engineering (ISOM), ETSI Telecommunication, Universidad Politécnica de Madrid (UPM), 28040, Madrid, Spain

(Molecular beam epitaxy of compound semiconductors, Materials for devices)

**C. Caneau**, Corning, NY 14830, USA

(Epitaxy, Semiconductor heterostructures)

**K. Deppert**, Dept. of Physics, Lund University, Box 118, S-221 00, Lund, Sweden

(Nanocrystals, Nanowires, Epitaxy, III-V semiconductors)

**J. Derby**, Dept. of Chemical Engineering and Material Science, University of Minnesota, 421 Washington Avenue SE, Minneapolis, MN 55455, USA

(Computational models)

**T. Duffar**, Science et Ingénierie des Matériaux et Procédés (SIMaP), 1130 rue de la Piscine, F-38402, St. Martin d'Hères, France

(Bulk crystal growth processes from the melt, including their numerical simulation, All types of defects in bulk crystals, especially in relation with growth conditions, Capillarity in bulk crystal growth)

**R. Fornari**, Dept. of Physics and Earth Sciences, Università degli Studi di Parma, Area delle Scienze 7/A, 43124, Parma, Italy

(Compound semiconductors, Semiconducting oxides, Melt growth, MOVPE)

**V. Fratello**, Quest Integrated Inc., 19823 58th Place, Kent, USA

(Oxide crystals, Liquid phase epitaxy of oxides, Solution growth of oxides, Magnetic materials, Optical materials, Piezoelectric materials)

**Y. Furukawa**, Inst. of Low Temperature Science, Hokkaido University, Kita-19, Nishi-8, Kita-ku, 060-0819, Sapporo, Hokkaido, Japan

(Crystallization kinetics, Pattern formation)

**M.S. Goorsky**, Dept. of Materials Science & Engineering, University of California at Los Angeles (UCLA), Los Angeles, CA 90095-1595, USA

(XRD characterization, Epitaxy for devices)

**C.M. Gourlay**, Dept. of Materials, Imperial College London, Prince Consort Road, SW7 2AZ, London, UK  
(Solidification, Microstructure evolution)

**K. Jacobs**, Ferdinand-Braun-Institut, Gustav-Kirchhoff-Straße 4, 12498, Berlin, Germany  
(Solvothermal growth, Oxide crystals, Epitaxy)

**C.W. Lan**, Dept. of Chemical Engineering, National Taiwan University, 10617, Taipei, Taiwan, ROC  
(Modeling and simulation, Semiconductor solar cells and photovoltaic materials, Optical crystals, Transport phenomena)

**P. Müller**, CINAM CNRS-UMR 7325, Campus de Luminy Case 913, CNRS - Aix-Marseille University, 13288, Marseille cedex, France

(Theory of crystal growth, Growth mechanisms, Epitaxy, Nanoscale materials, Thin films)

**T. Nishinaga**, University of Tokyo, 4-11-4 Minamisakasai, 277-0043, Kashiwa-City, Japan

(Semiconductor growth, Epitaxy, Nanostructures)

**D.P. Norton**, Office of Research, University of Florida, 223 Grinter Hall, PO Box 115500, Gainesville, FL 32611-5500, USA

(Oxide thin films, Epitaxy)

**A. Ohtomo**, Dept. of Applied Chemistry, Graduate School of Engineering, Tokyo Institute of Technology, 2-12-1-S1-1 Ookayama, Meguro-ku, 152-8550, Tokyo, Japan

**A.G. Ostrogorsky**, Dept. of Mechanical, Materials and Aerospace Engineering, Illinois Institute of Technology, 10 West 32nd Street, 243 Engineering One Building, Chicago, IL 60616-3793, USA

(Bulk crystal growth)

**T. Paskova**, Dept. of Electrical and Computer Engineering, North Carolina State University, 2092 Engineering Building II, Raleigh, NC 27695-7911, USA

(Growth of bulk nitrides, Epitaxy of highly mismatched systems, Defects in III-V semiconductors)

**M. Plapp**, Lab. de Physique d/I Matière Condensée, CNRS UMR 7643, École Polytechnique, 91128, Palaiseau, France

(Solidification, Theory and modeling)

**K. Ploog**, Paul-Drude-Inst. f Festkörperelekt., Hausvogteiplatz 5-7, 10117, Berlin, Germany

(Molecular beam epitaxy)

**S.R. Qiu**, Dept. of Physical and Life Sciences, Lawrence Livermore National Laboratory, 7000 East Avenue, Livermore, CA 94551, USA

(Solution growth, Biomineralization)

**J.M. Redwing**, Dept. of Materials Science and Engineering, Pennsylvania State University, 326 Steidle Building, University Park, PA 16802-5006, USA

(Nanoscale materials, Quantum dots, Nanoparticles, Nanowires)

**M. Rettenmayr**, Inst. für Materialwissenschaft, Friedrich-Schiller-Universität Jena, Löbdergraben 32, 07743, Jena, Germany

(Solidification)

**M. Roth**, Dept. of Genetics, Fac. of Math. & Natural Sciences, Hebrew University of Jerusalem, Givat Ram, 91904, Jerusalem, Israel

(Nonlinear optical and electro-optical materials)

**P. Rudolph**, Crystal Technology Consulting, Helga-Hahnemann-Str. 57, 12529, Schönefeld, Germany

(Defects, Bulk growth, Special types of growth technologies, Semiconductors, Thermodynamics and kinetics, Melt structure)

**K. Sangwal**, Department of Applied Physics, Lublin University of Technology, ul. Nadbystrzycka 38, 20-618, Lublin, Poland

(Solution growth, Crystallization kinetics, Growth morphology)

**G. Sazaki**, Phase Transition Dynamics Group, Institute of Low Temperature Science, Hokkaido University, N19-W8, Kita-ku, 060-0819, Sapporo, Japan

**D.W. Shaw**, University of Texas, 503 Potomac Pl., Southlake, TX 76092, USA

(Semiconductors, Epitaxy, Devices)

**M. Tischler**, Cooledge Lighting Inc., 120-13551 Commerce Parkway, Richmond, BC V6V 2L1, Canada  
(Priority communications)

**S. Uda**, Inst. for Materials Research, Tohoku University, 2-1-1 Katahira, 980-8577, Aoba-ku, Sendai, Japan

(Oxide crystal growth, Physical chemistry of melt, Growth mechanism)

**M. Uwaha**, Center for General Education, Aichi Institute of Technology, 1247 Yachigusa, Yakusa-cho, 470-0392, Toyota, Japan

(Growth kinetics)

**S. Veessler**, CINAM-UPR3118, Université de la Méditerranée (Aix-Marseille II), Campus de Luminy case 913, F-13288, Marseille, France

(Solution growth, Industrial - biological macromolecules, Pharmaceutical compounds)

**M. Weyers**, Dept. of Materials Technology, Leibniz-Institute fuer Hoechstfrequenztechnik, Ferdinand-Braun-Institut, Gustav-Kirchhoff-Straße 4, 12489, Berlin, Germany  
(Semiconducting III-V materials, Metal-organic vapour phase epitaxy, Epitaxial growth, Devices)  
**A. Zappettini**, Istituto dei Materiali per l'Elettronica ed il Magnetismo (IMEM), Consiglio Nazionale delle Ricerche (CNR), Parco Area delle Scienze 37/A, 43124, Parma, Italy  
(Compound semiconductors, Bulk crystal growth, Nanostructure growth)

***Founding Editor:***

**M. Schieber †**

***Co-Founders:***

**N. Cabrera**

**B. Chalmers**

**F.C. Frank**

***Former Advisor:***

**R.A. Laudise †**

## GUIDE FOR AUTHORS

---

### *Your Paper Your Way*

We now differentiate between the requirements for new and revised submissions. You may choose to submit your manuscript as a single Word or PDF file to be used in the refereeing process. Only when your paper is at the revision stage, will you be requested to put your paper in to a 'correct format' for acceptance and provide the items required for the publication of your article.

**To find out more, please visit the Preparation section below.**

### *Types of paper*

#### *Original research work*

As a guideline: experimental manuscripts should not be longer than 16 double-spaced typed pages and 8 figures and tables; for theoretical manuscripts a maximum of 20 pages and 10 figures and tables is suggested.

#### *Priority communications*

For reporting important new results only (must be accompanied by a statement regarding the "prime novelty"). Priority communications should not be longer than 5 double-spaced typed pages, and 3 figures + tables. Priority communications should be submitted to the Principal Editor and will be given priority in both the refereeing and production processes.

All manuscripts should be concisely written, stressing the motivation for, and the novel aspects of, the work. Contributions should contain an Abstract (of up to 200 words) and a Conclusions section, which particularly in the case of theoretical papers translates the results into terms readily accessible to most readers.

### *Contact details for submission*

Submissions outside of EES, such as a postal submission, must receive prior approval from the Principal Editor, Professor T. Kuech.

News or announcements should be submitted through the Principal Editor.

### *Submission checklist*

You can use this list to carry out a final check of your submission before you send it to the journal for review. Please check the relevant section in this Guide for Authors for more details.

#### **Ensure that the following items are present:**

One author has been designated as the corresponding author with contact details:

- E-mail address
- Full postal address

All necessary files have been uploaded:

#### *Manuscript:*

- Include keywords
- All figures (include relevant captions)
- All tables (including titles, description, footnotes)
- Ensure all figure and table citations in the text match the files provided
- Indicate clearly if color should be used for any figures in print

*Graphical Abstracts / Highlights files* (where applicable)

*Supplemental files* (where applicable)

Further considerations

- Manuscript has been 'spell checked' and 'grammar checked'
- All references mentioned in the Reference List are cited in the text, and vice versa
- Permission has been obtained for use of copyrighted material from other sources (including the Internet)
- A competing interests statement is provided, even if the authors have no competing interests to declare
- Journal policies detailed in this guide have been reviewed
- Referee suggestions and contact details provided, based on journal requirements

For further information, visit our [Support Center](#).

## **BEFORE YOU BEGIN**

### **Ethics in publishing**

Please see our information pages on [Ethics in publishing](#) and [Ethical guidelines for journal publication](#).

### **Declaration of interest**

All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential conflicts of interest include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Authors must disclose any interests in two places: 1. A summary declaration of interest statement in the title page file (if double-blind) or the manuscript file (if single-blind). If there are no interests to declare then please state this: 'Declarations of interest: none'. This summary statement will be ultimately published if the article is accepted. 2. Detailed disclosures as part of a separate Declaration of Interest form, which forms part of the journal's official records. It is important for potential interests to be declared in both places and that the information matches. [More information](#).

### **Submission declaration and verification**

Submission of an article implies that the work described has not been published previously (except in the form of an abstract, a published lecture or academic thesis, see '[Multiple, redundant or concurrent publication](#)' for more information), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. To verify originality, your article may be checked by the originality detection service [Crossref Similarity Check](#).

### **Preprints**

Please note that [preprints](#) can be shared anywhere at any time, in line with Elsevier's [sharing policy](#). Sharing your preprints e.g. on a preprint server will not count as prior publication (see '[Multiple, redundant or concurrent publication](#)' for more information).

### **Changes to authorship**

Authors are expected to consider carefully the list and order of authors **before** submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only **before** the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the **corresponding author**: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed.

Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors **after** the manuscript has been accepted. While the Editor considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.

### **Copyright**

Upon acceptance of an article, authors will be asked to complete a 'Journal Publishing Agreement' (see [more information](#) on this). An e-mail will be sent to the corresponding author confirming receipt of the manuscript together with a 'Journal Publishing Agreement' form or a link to the online version of this agreement.

Subscribers may reproduce tables of contents or prepare lists of articles including abstracts for internal circulation within their institutions. [Permission](#) of the Publisher is required for resale or distribution outside the institution and for all other derivative works, including compilations and translations. If excerpts from other copyrighted works are included, the author(s) must obtain written permission from the copyright owners and credit the source(s) in the article. Elsevier has [preprinted forms](#) for use by authors in these cases.

For gold open access articles: Upon acceptance of an article, authors will be asked to complete an 'Exclusive License Agreement' ([more information](#)). Permitted third party reuse of gold open access articles is determined by the author's choice of [user license](#).

### **Author rights**

As an author you (or your employer or institution) have certain rights to reuse your work. [More information](#).

#### *Elsevier supports responsible sharing*

Find out how you can [share your research](#) published in Elsevier journals.

### **Role of the funding source**

You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. If the funding source(s) had no such involvement then this should be stated.

#### *Funding body agreements and policies*

Elsevier has established a number of agreements with funding bodies which allow authors to comply with their funder's open access policies. Some funding bodies will reimburse the author for the gold open access publication fee. Details of [existing agreements](#) are available online.

### **Open access**

This journal offers authors a choice in publishing their research:

#### **Subscription**

- Articles are made available to subscribers as well as developing countries and patient groups through our [universal access programs](#).
- No open access publication fee payable by authors.
- The Author is entitled to post the [accepted manuscript](#) in their institution's repository and make this public after an embargo period (known as green Open Access). The [published journal article](#) cannot be shared publicly, for example on ResearchGate or Academia.edu, to ensure the sustainability of peer-reviewed research in journal publications. The embargo period for this journal can be found below.

#### **Gold open access**

- Articles are freely available to both subscribers and the wider public with permitted reuse.
- A gold open access publication fee is payable by authors or on their behalf, e.g. by their research funder or institution.

Regardless of how you choose to publish your article, the journal will apply the same peer review criteria and acceptance standards.

For gold open access articles, permitted third party (re)use is defined by the following [Creative Commons user licenses](#):

#### *Creative Commons Attribution (CC BY)*

Lets others distribute and copy the article, create extracts, abstracts, and other revised versions, adaptations or derivative works of or from an article (such as a translation), include in a collective work (such as an anthology), text or data mine the article, even for commercial purposes, as long as they credit the author(s), do not represent the author as endorsing their adaptation of the article, and do not modify the article in such a way as to damage the author's honor or reputation.

#### *Creative Commons Attribution-NonCommercial-NoDerivs (CC BY-NC-ND)*

For non-commercial purposes, lets others distribute and copy the article, and to include in a collective work (such as an anthology), as long as they credit the author(s) and provided they do not alter or modify the article.

The gold open access publication fee for this journal is **USD 2750**, excluding taxes. Learn more about Elsevier's pricing policy: <https://www.elsevier.com/openaccesspricing>.

#### *Green open access*

Authors can share their research in a variety of different ways and Elsevier has a number of green open access options available. We recommend authors see our [green open access page](#) for further information. Authors can also self-archive their manuscripts immediately and enable public

access from their institution's repository after an embargo period. This is the version that has been accepted for publication and which typically includes author-incorporated changes suggested during submission, peer review and in editor-author communications. Embargo period: For subscription articles, an appropriate amount of time is needed for journals to deliver value to subscribing customers before an article becomes freely available to the public. This is the embargo period and it begins from the date the article is formally published online in its final and fully citable form. [Find out more](#).

This journal has an embargo period of 24 months.

#### *Elsevier Researcher Academy*

[Researcher Academy](#) is a free e-learning platform designed to support early and mid-career researchers throughout their research journey. The "Learn" environment at Researcher Academy offers several interactive modules, webinars, downloadable guides and resources to guide you through the process of writing for research and going through peer review. Feel free to use these free resources to improve your submission and navigate the publication process with ease.

#### *Language (usage and editing services)*

Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the [English Language Editing service](#) available from Elsevier's WebShop.

### **Submission**

Our online submission system guides you stepwise through the process of entering your article details and uploading your files. The system converts your article files to a single PDF file used in the peer-review process. Editable files (e.g., Word, LaTeX) are required to typeset your article for final publication. All correspondence, including notification of the Editor's decision and requests for revision, is sent by e-mail.

Please submit, with the manuscript, the names and addresses of 4 to 6 potential referees.

## **PREPARATION**

### **NEW SUBMISSIONS**

Submission to this journal proceeds totally online and you will be guided stepwise through the creation and uploading of your files. The system automatically converts your files to a single PDF file, which is used in the peer-review process.

As part of the Your Paper Your Way service, you may choose to submit your manuscript as a single file to be used in the refereeing process. This can be a PDF file or a Word document, in any format or layout that can be used by referees to evaluate your manuscript. It should contain high enough quality figures for refereeing. If you prefer to do so, you may still provide all or some of the source files at the initial submission. Please note that individual figure files larger than 10 MB must be uploaded separately.

#### *References*

There are no strict requirements on reference formatting at submission. References can be in any style or format as long as the style is consistent. Where applicable, author(s) name(s), journal title/book title, chapter title/article title, year of publication, volume number/book chapter and the pagination must be present. Use of DOI is highly encouraged. The reference style used by the journal will be applied to the accepted article by Elsevier at the proof stage. Note that missing data will be highlighted at proof stage for the author to correct.

#### *Formatting requirements*

There are no strict formatting requirements but all manuscripts must contain the essential elements needed to convey your manuscript, for example Abstract, Keywords, Introduction, Materials and Methods, Results, Conclusions, Artwork and Tables with Captions.

If your article includes any Videos and/or other Supplementary material, this should be included in your initial submission for peer review purposes.

Divide the article into clearly defined sections.

#### *Figures and tables embedded in text*

Please ensure the figures and the tables included in the single file are placed next to the relevant text in the manuscript, rather than at the bottom or the top of the file. The corresponding caption should be placed directly below the figure or table.



## Peer review

This journal operates a single blind review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor's decision is final. [More information on types of peer review.](#)

## REVISED SUBMISSIONS

Authors must submit their manuscript online as a LaTeX, Microsoft (MS) Word, WordPerfect, PostScript document via the online submission system.

### *Use of word processing software*

Regardless of the file format of the original submission, at revision you must provide us with an editable file of the entire article. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the [Guide to Publishing with Elsevier](#)). See also the section on Electronic artwork.

To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

### *LaTeX*

You are recommended to use the Elsevier article class [elsarticle.cls](#) to prepare your manuscript and [BibTeX](#) to generate your bibliography.

Our [LaTeX site](#) has detailed submission instructions, templates and other information.

## Article structure

Structure. Please adhere to the following order of presentation: Title, Author(s), Affiliation(s), Abstract, Keywords, Main text, Acknowledgements, Appendices, References, Figure captions, Tables. For regular articles a maximum of four levels of sections and subsections is allowed.

### *Subdivision - numbered sections*

Divide your article into clearly defined and numbered sections. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. (the abstract is not included in section numbering). Use this numbering also for internal cross-referencing: do not just refer to 'the text'. Any subsection may be given a brief heading. Each heading should appear on its own separate line.

## Essential title page information

- **Title.** Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.

- **Author names and affiliations.** Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. You can add your name between parentheses in your own script behind the English transliteration. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author.

- **Corresponding author.** Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. This responsibility includes answering any future queries about Methodology and Materials. **Ensure that the e-mail address is given and that contact details are kept up to date by the corresponding author.**

- **Present/permanent address.** If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

## Abstract

A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

### *Highlights*

Highlights are mandatory for this journal. They consist of a short collection of bullet points that convey the core findings of the article and should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point). You can view [example Highlights](#) on our information site.

### **Keywords**

Please supply up to six keywords from the [keyword list](#) and insert them below the abstract in the proof of your paper which will be sent to you shortly. Each keyword should be accompanied by the capital letter denoting the category from which the keyword has been selected, e.g. Keywords: A1.Biocrystallization, B1. Nanomaterials. If the keywords from the list are not relevant, authors may choose their own keywords, but each of these should also be accompanied by the capital letter denoting the category into which it falls.

### *Formatting of funding sources*

List funding sources in this standard way to facilitate compliance to funder's requirements:

Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, please include the following sentence:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

### *Footnotes*

Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors build footnotes into the text, and this feature may be used. Should this not be the case, indicate the position of footnotes in the text and present the footnotes themselves separately at the end of the article.

### **Artwork**

#### *Electronic artwork*

##### *General points*

- Make sure you use uniform lettering and sizing of your original artwork.
- Preferred fonts: Arial (or Helvetica), Times New Roman (or Times), Symbol, Courier.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Indicate per figure if it is a single, 1.5 or 2-column fitting image.
- For Word submissions only, you may still provide figures and their captions, and tables within a single file at the revision stage.
- Please note that individual figure files larger than 10 MB must be provided in separate source files. A detailed [guide on electronic artwork](#) is available.

**You are urged to visit this site; some excerpts from the detailed information are given here.**

##### *Formats*

Regardless of the application used, when your electronic artwork is finalized, please 'save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):

EPS (or PDF): Vector drawings. Embed the font or save the text as 'graphics'.

TIFF (or JPG): Color or grayscale photographs (halftones): always use a minimum of 300 dpi.

TIFF (or JPG): Bitmapped line drawings: use a minimum of 1000 dpi.

TIFF (or JPG): Combinations bitmapped line/half-tone (color or grayscale): a minimum of 500 dpi is required.

##### **Please do not:**

- Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); the resolution is too low.
- Supply files that are too low in resolution.

- Submit graphics that are disproportionately large for the content.

#### *Color artwork*

Please make sure that artwork files are in an acceptable format (TIFF (or JPEG), EPS (or PDF), or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then Elsevier will ensure, at no additional charge, that these figures will appear in color online (e.g., ScienceDirect and other sites) regardless of whether or not these illustrations are reproduced in color in the printed version. **For color reproduction in print, you will receive information regarding the costs from Elsevier after receipt of your accepted article.** Please indicate your preference for color: in print or online only. [Further information on the preparation of electronic artwork.](#)

#### *Figure captions*

Ensure that each illustration has a caption. A caption should comprise a brief title (**not** on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

#### **Tables**

Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

#### **References**

##### *Citation in text*

Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

##### *Reference links*

Increased discoverability of research and high quality peer review are ensured by online links to the sources cited. In order to allow us to create links to abstracting and indexing services, such as Scopus, CrossRef and PubMed, please ensure that data provided in the references are correct. Please note that incorrect surnames, journal/book titles, publication year and pagination may prevent link creation. When copying references, please be careful as they may already contain errors. Use of the DOI is encouraged.

A DOI can be used to cite and link to electronic articles where an article is in-press and full citation details are not yet known, but the article is available online. A DOI is guaranteed never to change, so you can use it as a permanent link to any electronic article. An example of a citation using DOI for an article not yet in an issue is: VanDecar J.C., Russo R.M., James D.E., Ambeh W.B., Franke M. (2003). Aseismic continuation of the Lesser Antilles slab beneath northeastern Venezuela. *Journal of Geophysical Research*, <https://doi.org/10.1029/2001JB000884>. Please note the format of such citations should be in the same style as all other references in the paper.

##### *Web references*

As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

##### *Data references*

This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.

### *References in a special issue*

Please ensure that the words 'this issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.

### *Reference management software*

Most Elsevier journals have their reference template available in many of the most popular reference management software products. These include all products that support [Citation Style Language styles](#), such as [Mendeley](#) and [Zotero](#), as well as EndNote. Using the word processor plug-ins from these products, authors only need to select the appropriate journal template when preparing their article, after which citations and bibliographies will be automatically formatted in the journal's style. If no template is yet available for this journal, please follow the format of the sample references and citations as shown in this Guide.

Users of Mendeley Desktop can easily install the reference style for this journal by clicking the following link:

<http://open.mendeley.com/use-citation-style/journal-of-crystal-growth>

When preparing your manuscript, you will then be able to select this style using the Mendeley plug-ins for Microsoft Word or LibreOffice.

### *Reference formatting*

There are no strict requirements on reference formatting at submission. References can be in any style or format as long as the style is consistent. Where applicable, author(s) name(s), journal title/book title, chapter title/article title, year of publication, volume number/book chapter and the pagination must be present. Use of DOI is highly encouraged. The reference style used by the journal will be applied to the accepted article by Elsevier at the proof stage. Note that missing data will be highlighted at proof stage for the author to correct. If you do wish to format the references yourself they should be arranged according to the following examples:

#### *Reference style*

*Text:* Indicate references by number(s) in square brackets in line with the text. The actual authors can be referred to, but the reference number(s) must always be given.

Example: '..... as demonstrated [3,6]. Barnaby and Jones [8] obtained a different result ....'

*List:* Number the references (numbers in square brackets) in the list in the order in which they appear in the text.

#### *Examples:*

Reference to a journal publication:

[1] J. van der Geer, J.A.J. Hanraads, R.A. Lupton, The art of writing a scientific article, *J. Sci. Commun.* 163 (2010) 51–59.

Reference to a book:

[2] W. Strunk Jr., E.B. White, *The Elements of Style*, fourth ed., Longman, New York, 2000.

Reference to a chapter in an edited book:

[3] G.R. Mettam, L.B. Adams, How to prepare an electronic version of your article, in: B.S. Jones, R.Z. Smith (Eds.), *Introduction to the Electronic Age*, E-Publishing Inc., New York, 2009, pp. 281–304.

Reference to a website:

[4] Cancer Research UK, Cancer statistics reports for the UK. <http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/>, 2003 (accessed 13 March 2003).

Reference to a dataset:

[dataset] [5] M. Oguro, S. Imahiro, S. Saito, T. Nakashizuka, Mortality data for Japanese oak wilt disease and surrounding forest compositions, *Mendeley Data*, v1, 2015. <https://doi.org/10.17632/xwj98nb39r.1>.

Number system with journal name; volume (year) and page number.

### *Journal abbreviations source*

Journal names should be abbreviated according to the [List of Title Word Abbreviations](#).

### **Video**

Elsevier accepts video material and animation sequences to support and enhance your scientific research. Authors who have video or animation files that they wish to submit with their article are strongly encouraged to include links to these within the body of the article. This can be done in the same way as a figure or table by referring to the video or animation content and noting in the body text where it should be placed. All submitted files should be properly labeled so that they directly relate to the video file's content. . In order to ensure that your video or animation material is directly usable, please provide the file in one of our recommended file formats with a preferred maximum

size of 150 MB per file, 1 GB in total. Video and animation files supplied will be published online in the electronic version of your article in Elsevier Web products, including [ScienceDirect](#). Please supply 'stills' with your files: you can choose any frame from the video or animation or make a separate image. These will be used instead of standard icons and will personalize the link to your video data. For more detailed instructions please visit our [video instruction pages](#). Note: since video and animation cannot be embedded in the print version of the journal, please provide text for both the electronic and the print version for the portions of the article that refer to this content.

### **AudioSlides**

The journal encourages authors to create an AudioSlides presentation with their published article. AudioSlides are brief, webinar-style presentations that are shown next to the online article on ScienceDirect. This gives authors the opportunity to summarize their research in their own words and to help readers understand what the paper is about. [More information and examples are available](#). Authors of this journal will automatically receive an invitation e-mail to create an AudioSlides presentation after acceptance of their paper.

### **Data visualization**

Include interactive data visualizations in your publication and let your readers interact and engage more closely with your research. Follow the instructions [here](#) to find out about available data visualization options and how to include them with your article.

### **Supplementary material**

Supplementary material such as applications, images and sound clips, can be published with your article to enhance it. Submitted supplementary items are published exactly as they are received (Excel or PowerPoint files will appear as such online). Please submit your material together with the article and supply a concise, descriptive caption for each supplementary file. If you wish to make changes to supplementary material during any stage of the process, please make sure to provide an updated file. Do not annotate any corrections on a previous version. Please switch off the 'Track Changes' option in Microsoft Office files as these will appear in the published version.

### **Research data**

This journal encourages and enables you to share data that supports your research publication where appropriate, and enables you to interlink the data with your published articles. Research data refers to the results of observations or experimentation that validate research findings. To facilitate reproducibility and data reuse, this journal also encourages you to share your software, code, models, algorithms, protocols, methods and other useful materials related to the project.

Below are a number of ways in which you can associate data with your article or make a statement about the availability of your data when submitting your manuscript. If you are sharing data in one of these ways, you are encouraged to cite the data in your manuscript and reference list. Please refer to the "References" section for more information about data citation. For more information on depositing, sharing and using research data and other relevant research materials, visit the [research data](#) page.

#### *Data linking*

If you have made your research data available in a data repository, you can link your article directly to the dataset. Elsevier collaborates with a number of repositories to link articles on ScienceDirect with relevant repositories, giving readers access to underlying data that gives them a better understanding of the research described.

There are different ways to link your datasets to your article. When available, you can directly link your dataset to your article by providing the relevant information in the submission system. For more information, visit the [database linking page](#).

For [supported data repositories](#) a repository banner will automatically appear next to your published article on ScienceDirect.

In addition, you can link to relevant data or entities through identifiers within the text of your manuscript, using the following format: Database: xxxx (e.g., TAIR: AT1G01020; CCDC: 734053; PDB: 1XFN).

### *Mendeley Data*

This journal supports Mendeley Data, enabling you to deposit any research data (including raw and processed data, video, code, software, algorithms, protocols, and methods) associated with your manuscript in a free-to-use, open access repository. Before submitting your article, you can deposit the relevant datasets to *Mendeley Data*. Please include the DOI of the deposited dataset(s) in your main manuscript file. The datasets will be listed and directly accessible to readers next to your published article online.

For more information, visit the [Mendeley Data for journals page](#).

### *Data statement*

To foster transparency, we encourage you to state the availability of your data in your submission. This may be a requirement of your funding body or institution. If your data is unavailable to access or unsuitable to post, you will have the opportunity to indicate why during the submission process, for example by stating that the research data is confidential. The statement will appear with your published article on ScienceDirect. For more information, visit the [Data Statement page](#).

## **AFTER ACCEPTANCE**

### **Online proof correction**

Corresponding authors will receive an e-mail with a link to our online proofing system, allowing annotation and correction of proofs online. The environment is similar to MS Word: in addition to editing text, you can also comment on figures/tables and answer questions from the Copy Editor. Web-based proofing provides a faster and less error-prone process by allowing you to directly type your corrections, eliminating the potential introduction of errors.

If preferred, you can still choose to annotate and upload your edits on the PDF version. All instructions for proofing will be given in the e-mail we send to authors, including alternative methods to the online version and PDF.

We will do everything possible to get your article published quickly and accurately. Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only be considered at this stage with permission from the Editor. It is important to ensure that all corrections are sent back to us in one communication. Please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility.

### **Offprints**

The corresponding author will, at no cost, receive a customized [Share Link](#) providing 50 days free access to the final published version of the article on [ScienceDirect](#). The Share Link can be used for sharing the article via any communication channel, including email and social media. For an extra charge, paper offprints can be ordered via the offprint order form which is sent once the article is accepted for publication. Both corresponding and co-authors may order offprints at any time via Elsevier's [Webshop](#). Corresponding authors who have published their article gold open access do not receive a Share Link as their final published version of the article is available open access on ScienceDirect and can be shared through the article DOI link.

## **AUTHOR INQUIRIES**

Visit the [Elsevier Support Center](#) to find the answers you need. Here you will find everything from Frequently Asked Questions to ways to get in touch.

You can also [check the status of your submitted article](#) or find out [when your accepted article will be published](#).

© Copyright 2018 Elsevier | <https://www.elsevier.com>