CARBOHYDRATE POLYMERS
A Journal Devoted to Scientific and Technological Aspects of Industrially Relevant Polysaccharides

DESCRIPTION

Note: The Aims and Scope of Carbohydrate Polymers must be complied with in order for submissions to be considered for review and possible publication. The Aims and Scope have been modified as of 24 July 2018.

Carbohydrate Polymers is a major journal within the field of glycoscience, and covers the study and exploitation of polysaccharides which have current or potential application in areas such as bioenergy, bioplastics, biomaterials, biorefining, chemistry, drug delivery, food, health, nanotechnology, packaging, paper, pharmaceuticals, medicine, oil recovery, textiles, tissue engineering and wood, and other aspects of glycoscience.

The role of the well-characterized carbohydrate polymer must be the major proportion of the work reported, not a peripheral topic. At least one named carbohydrate polymer must be cited and be the main focus of the paper and its title. Research must be innovative and advance scientific knowledge.

Characterization - For all polysaccharides, including those obtained from a supplier, essential structural information which will affect their behavior in the subsequent work should be given, along with a description of how that information was ascertained. Examples of such essential information include molecular weight, mannuronate/guluronate ratio for alginites, degree of esterification for pectin, degree of deacetylation for chitosan. Editors are unlikely to send papers for formal review with a statement such as "sodium alginate was purchased from XXX Inc." unless additional information is supplied. For papers involving synthesis, polysaccharide derivatives must also be well-characterized. For papers describing identity or application of newly-discovered polysaccharides, purity and monosaccharide composition are essential; some molecular size and linkage information is highly desirable.

Hypotheses - Nearly all scientific papers benefit from inclusion of a statement of hypothesis. Such statements should be concise, declarative, and should describe the one or more key hypotheses that the studies upon which the manuscript is based were intended to confirm or refute. Inclusion of a hypothesis statement makes it simple to contrast the hypothesis with the most relevant previous literature and point out what the authors feel is distinct about the current hypothesis (novelty). It also permits the authors to describe why they feel it would be important to prove the hypothesis correct (significance).

Topics of interest to the journal:
- structure-property relationships
• analytical methods
• chemical, enzymatic and physical modifications
• biosynthesis
• natural functions
• interactions with other materials

Topics not of interest to the journal:
• biological, physiological and pharmacological aspects of non-carbohydrate; molecules attached to, or mixed with, carbohydrate polymers, unless the polysaccharide has a relevant and specific role;
• materials science of biocomposites where there is no mention of any specific carbohydrate polymer, or the role of the carbohydrate polymer is not the major proportion of the study;
• polyalkanoates, polylactic acid, or lignin.
• routine studies of extraction yields without characterisation of the extracted polysaccharide under the different conditions.
• routine studies of complexation of a drug with a single cyclodextrin.
• studies of newly discovered natural polysaccharides or new polysaccharide derivatives where the structure of the polysaccharide (derivative) is unknown.
• production and isolation of enzymes which act on polysaccharides (studies on the mode of action of an enzyme on a polysaccharide are within the journal scope)
• carbohydrate oligomers where the degree of polymerization is less than four
• treatments of cotton fabrics and cellulose-based paper where the research is largely not about the component cellulose itself;
• use of carbohydrate polymers as a support material (e.g. in enzyme immobilization, chromatography, etc.) where there is no specific involvement of the chemistry of the carbohydrate polymer.

AUDIENCE

University and industrial research institutes; users and manufacturers of carbohydrate polymers.

IMPACT FACTOR

2018: 6.044 © Clarivate Analytics Journal Citation Reports 2019

ABSTRACTING AND INDEXING

BIOSIS Citation Index
Polymer Contents
Science Citation Index
Web of Science
EMBiology
Chemical Abstracts
Current Contents - Agriculture, Biology & Environmental Sciences
Engineering Index
FSTA (Food Science and Technology Abstracts)
Theoretical Chemical Engineering Abstracts
Chemical Engineering Biotechnology Abstracts
Scopus

EDITORIAL BOARD

Editors-in-Chief
John F. Kennedy, Chembiotech Laboratories Ltd, WR15 8SG, Tenbury Wells, United Kingdom
Manuel Coimbra, University of Aveiro Chemistry Department, 3810-193, Aveiro, Portugal

Editors
Tatiana Budtova, Centre for Formation of Materials, Sophia Antipolis Cedex, France
Cristina de Castro, University of Naples - Parthenope, Napoli, Italy
Kevin Edgar, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, United States
Robert Gilbert, University of Queensland, Brisbane, Queensland, Australia
Huazhong University of Science and Technology, Wuhan, China
Simon McCarthy, HemCon Medical Technologies Inc, Portland, Oregon, United States
Berit Smedstad Paulsen, University of Oslo, Oslo, Norway
Carlos Stortz, University of Buenos Aires, Buenos Aires, Argentina
Run-Cang Sun, Dalian Polytechnic University, Center for Lignocellulose Science and Engineering, School of Light Industry and Chemical Engineering, Dalian, China

Editorial Manager
Cláudia Nunes, University of Aveiro Department of Materials and Ceramic Engineering, Campus Universitário de Santiago, 3810-193, Aveiro, Portugal

Founding Editor
John Mitchell, University of Nottingham School of Biosciences, Loughborough, United Kingdom

Editorial Board Members
James BeMiller, Purdue University, West Lafayette, Indiana, United States
Éric Bertof, University of Minnesota Department of Animal Science, St. Paul, Minnesota, United States
H Cheng, USDA-ARS Southern Regional Research Center, New Orleans, Louisiana, United States
Bjørn Christensen, Norwegian University of Science and Technology, Trondheim, Norway
Maurice Collins, University of Limerick, Limerick, Ireland
Hongbing Deng, Wuhan University, Wuhan, China
Keyur Desai, Kimberly-Clark Corporation
Jacques Desbrieres, University of Pau and Pays de l'Adour, Pau, France
Alain Dufresne, International Graduate School of Paper Print Communication and Biomaterials, St Martin d'Heres, France
Pedro Fardim, Åbo Akademi University Physics, TURKU, Finland
Jovin Hasjim, Roquette Management Shanghai Co Ltd, Shanghai, China
Glória Huerta-Angeles, Contipro a s, Dolni Dobrouc, Czech Republic
Marcello Iacomini, Federal University of Parana, Curitiba, Brazil
Hiroshi Kamitakahara, Kyoto University, Kyoto, Japan
Andreas Koschella, Friedrich Schiller University Jena, Jena, Germany
Xiaoxi Li, South China University of Technology, Guangzhou, China
Robert Linhardt, Rensselaer Polytechnic Institute, Troy, New York, United States
Ping Lu, Long Island University, Brooklyn, New York, United States
Pawadee Methacanon, Metal and Materials Technology Center, Khlong Luang, Thailand
F.L. Fwu-Long Mi, Taipei Medical University, Department of Biochemistry and Molecular Cell Biology, School of Medicine, College of Medicine, Taipei, Taiwan
John Moore, Stellenbosch University Department of Viticulture and Oenology, Matieland, South Africa
Edwin Morris, University College Cork National University of Ireland, Cork, Ireland
Patrick Navard, Engineering College Paris, Paris, France
Poonsuk Prasertsan, Prince of Songkla University Department of Industrial Biotechnology, Hat Yai, Thailand
Tan Sims, Victoria University of Wellington Ferrier Research Institute, Wellington, New Zealand
Rekha Singhal, Institute of Chemical Technology, Mumbai, India
Andrej Sinica, University of Chemistry and Technology Prague, Praha, Czech Republic
Maciej Skotak, New Jersey Institute of Technology, Newark, New Jersey, United States
Stefan Spirk, Graz University of Technology, Graz, Austria
Eduardo Jaime Vernon-Carter, Metropolitan Autonomous University Iztapalapa, Iztapalapa, Mexico
Manuel Vilanova, University of Porto, Portugal
Qi Wang, Agriculture and Agri-Food Canada Guelph Research and Development Centre, Guelph, Ontario, Canada
Pete Williams, Wrexham Glyndwr University, Wrexham, United Kingdom
Jian-Yong Wu, The Hong Kong Polytechnic University, Kowloon, Hong Kong
Gregory Ziegler, Pennsylvania State University, University Park, Pennsylvania, United States
GUIDE FOR AUTHORS

INTRODUCTION

Aims and scope: The Aims and Scope of Carbohydrate Polymers must be complied with in order for submissions to be considered for review and possible publication. The Aims and Scope have been modified as of 24 July 2018.

Carbohydrate Polymers is a major journal within the field of glycoscience, and covers the study and exploitation of polysaccharides which have current or potential application in areas such as bioenergy, bioplastics, biomaterials, biorefining, chemistry, drug delivery, food, health, nanotechnology, packaging, paper, pharmaceuticals, medicine, oil recovery, textiles, tissue engineering and wood, and other aspects of glycoscience.

The role of the well-characterized carbohydrate polymer must be the major proportion of the work reported, not a peripheral. At least one named carbohydrate polymer must be cited and be the main focus of the paper and its title. Research must be innovative and advance scientific knowledge.

Characterization: For all polysaccharides, including those obtained from a supplier, essential structural information which will affect their behavior in the subsequent work should be given, along with a description of how that information was ascertained. Examples of such essential information include molecular weight, mannuronate/guluronate ratio for alginates, degree of esterification for pectin, degree of deacetylation for chitosan. Editors are unlikely to send papers for formal review with a statement such as "sodium alginate was purchased from XXX Inc." unless additional information is supplied. For papers involving synthesis, polysaccharide derivatives must also be well-characterized. For papers describing identity or application of newly-discovered polysaccharides, purity and monosaccharide composition are essential; some molecular size and linkage information is highly desirable.

Hypothesis: Nearly all scientific papers benefit from inclusion of a statement of hypothesis. Such statements should be clear, concise, and declarative. The statement should describe the one or more key hypotheses that the work described in the manuscript was intended to confirm or refute. Inclusion of a hypothesis statement makes it simple to contrast the hypothesis with the most relevant previous literature and point out what the authors feel is distinct about the current hypothesis (novelty). It also permits the authors to describe why they feel it would be important to prove the hypothesis correct (significance).

Topics of interest to the journal: structure-property relationships analytical methods chemical, enzymatic and physical modifications biosynthesis natural functions interactions with other materials Glycogen

Topics not of interest to the journal: biological, physiological and pharmacological aspects of non-carbohydrate; molecules attached to, or mixed with, carbohydrate polymers, unless the polysaccharide has a relevant and specific role; materials science of biocomposites where there is no mention of any specific carbohydrate polymer, or the role of the carbohydrate polymer is not the major proportion of the study; polyalkanoates, polylactic acid, or lignin; routine studies of extraction yields without characterisation of the extracted polysaccharide under the different conditions; routine studies of complexation of a drug with a single cyclodextrin; studies of newly discovered natural polysaccharides or new polysaccharide derivatives where the structure of the polysaccharide (derivative) is unknown; production and isolation of enzymes which act on polysaccharides (studies on the mode of action of an enzyme on a polysaccharide are within the journal scope); carbohydrate oligomers where the degree of polymerization is less than four; treatments of cotton fabrics and cellulose-based paper where the research is largely not about the component cellulose itself; use of carbohydrate polymers as a support material (e.g. in enzyme immobilization, chromatography, etc.) where there is no specific involvement of the chemistry of the carbohydrate polymer.

Types of paper

Original full-length research papers should contain material that has not been previously published elsewhere, except in a preliminary form. These papers should not exceed 6000 words of text (including references) and generally not more than 10 figures/tables. The same information should not be repeated in a figure and a table.
**Review papers** will be accepted in areas of topical interest and will normally emphasise literature published over the previous five years. They should not exceed 12,000 words (not including references) and should contain no more than 8 figures and 6 Tables. The same information should not be repeated in a figure and a table.

This journal (as do all high impact journals) places a very high bar on acceptance of reviews. This must be the case since a review is not the authors own work but is a representation from the author(s) of recent "high quality" work in an important field and is intended to provide an all-encompassing and in-depth presentation from the author(s) of the recent impactful developments, the opportunities, the failures, the challenges, the interfaces with other disciplines (and how these interfaces affect the science) in the field. Also, review manuscripts should be of the highest quality on initial submission and should not need considerable reworking or language improvements.

**Contact details for submission**
Contributors must submit their articles electronically via the Elsevier Editorial System http://ees.elsevier.com/carbpol. This is the only method of submission, and facilitates processing of your article.

**Review process**
A peer review system is used to ensure high quality of papers accepted for publication. The Editors will reject papers without formal review when it is deemed that the paper is on a topic outside the scope of the Journal, lacking technical merit or lacking appropriate characterization, missing a hypothesis, containing data which are non-reproducible (another scientist from a third-party laboratory must be able to reproduce your work), of narrow regional scope and significance, lacking novelty, does not advance scientific knowledge or is poorly written.

Previous publication of a paper on a particular topic does not guarantee publication of subsequent papers in that area, as the Aims and Scope of the journal are regularly updated. Please see the Current Aims and Scope before you submit.

**Revisions**
Any revised papers returned later than three months after being sent to authors with the reviewers' comments will be treated as a new submission. When submitting a revised paper authors must list all of the reviewer's comments and indicate how they have responded to the comment, and where in the paper they have made appropriate revisions. All modifications in the paper must be shown in red.

**Resubmitted Manuscripts**
It is the author's choice whether or not to resubmit a rejected manuscript to the journal. The expectation of the journal and its editors is that any resubmission will be the result of significant rewriting and perhaps additional experimentation as required to address all prior reviewer and editor concerns. Authors resubmitting previously rejected manuscripts are required to; 1) identify the manuscript as a resubmitted manuscript in the cover letter to the editor, including identification of the prior title and manuscript number, 2) address all reviewer concerns from the final reviews of the previous, rejected manuscript, and 3) include a "Response to Reviewers" document that includes those reviews from the previous version and your responses to those reviews; clearly identify what are reviewer comments and what are your responses, often the use of color is a convenient way to do so. You will also be requested to indicate this status during the submission process in EES.

**BEFORE YOU BEGIN**

**Ethics in publishing**
Please see our information pages on Ethics in publishing and Ethical guidelines for journal publication.

**Studies in humans and animals**
If the work involves the use of human subjects, the author should ensure that the work described has been carried out in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki) for experiments involving humans. The manuscript should be in line with the Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals and aim for the inclusion of representative human populations (sex, age and ethnicity) as per those recommendations. The terms sex and gender should be used correctly.
Authors should include a statement in the manuscript that informed consent was obtained for experimentation with human subjects. The privacy rights of human subjects must always be observed.

All animal experiments should comply with the ARRIVE guidelines and should be carried out in accordance with the U.K. Animals (Scientific Procedures) Act, 1986 and associated guidelines, EU Directive 2010/63/EU for animal experiments, or the National Institutes of Health guide for the care and use of Laboratory animals (NIH Publications No. 8023, revised 1978) and the authors should clearly indicate in the manuscript that such guidelines have been followed. The sex of animals must be indicated, and where appropriate, the influence (or association) of sex on the results of the study.

• Plagiarism and Ethical Concerns

By submitting this manuscript, the authors agree that text, equations, or figures from previously published articles or books have been clearly identified in full and their origin clearly explained in the adjacent text, with appropriate references given at the end of the paper. Duplication of text is rarely justified, even with diligent referencing. Exceptions may be made for descriptions of standard experimental techniques, or other standard methods used by the author in the investigation; but an appropriate citation is mandatory. Authors who duplicate material from their own published work in a new article, without clearly identifying the repeated material and its source as outlined above, are self-plagiarising.

If an author is found to have plagiarized content from another author or submits a duplicate publication the paper will be rejected without review. These actions may result in sanctions such as retraction of the article (along with the publication of a corrective notice with a direct link to the original article explaining the reason for the retraction) and a possible ban on future publications from the author. In addition, the scientific community at large, including the author's work place, may be notified about the case and the decision reached. Committing plagiarism or submitting a duplicate publication can have a negative impact on an author's scientific career.

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 competing interests 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.

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).

Use of inclusive language

Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Articles should make no assumptions about the beliefs or commitments of any reader, should contain nothing which might imply that one individual is superior to another on the grounds of race, sex, culture or any other characteristic, and should use inclusive language throughout. Authors should ensure that writing is free from bias, for instance by using 'he or she', 'his/her' instead of 'he' or 'his', and by making use of job titles that are free of stereotyping (e.g. 'chairperson' instead of 'chairman' and 'flight attendant' instead of 'stewardess').

Author contributions

For transparency, we encourage authors to submit an author statement file outlining their individual contributions to the paper using the relevant CRedit roles: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Roles/Writing - original draft; Writing - review & editing. Authorship statements should be formatted with the names of authors first and CRedit role(s) following. More details and an example
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.

No additions, deletions or changes to authorship of a paper will be permitted after the article is accepted.

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 3150**, excluding taxes. Learn more about Elsevier's pricing policy: [https://www.elsevier.com/openaccesspricing](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 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 12 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 Author Services.

**Submission**
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 source files to a single PDF file of the article, which is used in the peer-review process. Please note that even though manuscript source files are converted to PDF files at submission for the review process, source files containing the accepted revisions are needed for further processing after acceptance. All correspondence, including notification of the Editor's decision and requests for revision, takes place by e-mail removing the need for a paper trail.

**Reviewers**
Authors are required to submit with their articles, the names, complete affiliations (spelled out), country and contact details (including current and valid (preferably business) e-mail address) of three potential reviewers. Email addresses and reviewer names will be checked for validity. Your potential reviewers must not be from your institute, and at least two should be from a different country. Authors must not suggest reviewers with whom they have collaborated within the past two years.
Your submission will be rejected if these are not supplied. Names provided may be used for other submissions on the same topic. Reviewers must have specific expertise on the subject of your article and/or the techniques employed in your study. Briefly state the appropriate expertise of each reviewer. Do not select a referee only because they have expertise on polysaccharides, this is not specific enough. For each reviewer you suggest you must include details of two recent relevant research or review papers authored by the potential reviewer which have appeared in good quality scientific journals. Authors cited in your paper can be useful suggested reviewers, provided that they have published in the field over the last few years.

**PREPARATION**

**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.

**Use of word processing software**

It is important that the file be saved in the native format of the word processor used. The text should be in single-column format. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. In particular, do not use the word processor's options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. When preparing tables, if you are using a table grid, use only one grid for each individual table and not a grid for each row. If no grid is used, use tabs, not spaces, to align columns. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the Guide to Publishing with Elsevier). Carbohydrate Polymers requires authors to include tables and figures in the body of the article at the appropriate position, not at the end of the article. 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.

Pages must be numbered, and lines must be numbered consecutively throughout the manuscript.

**Article structure**

(The abstract is not included in section numbering; see specific instructions below.)

**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.

**Introduction**

State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results. Focus on a number of key references; do not overlook the earlier, seminal work.

**Hypotheses**

Nearly all scientific papers benefit from inclusion of a statement of hypothesis. Such statements should be clear, concise, and declarative. The statement should describe the one or more key hypotheses that the work described in the manuscript was intended to confirm or refute. Inclusion of a hypothesis statement makes it simple to contrast the hypothesis with the most relevant previous literature and point out what the authors feel is distinct about the current hypothesis (novelty). It also permits the authors to describe why they feel it would be important to prove the hypothesis correct (significance).

**Submissions must include a statement of hypothesis and authors will be asked to copy and paste this into the editorial system as part of the submission process.** The hypothesis shall be stated in the introductory section, and the conclusion section shall include your conclusion about whether the hypothesis was confirmed or refuted, as well as describing any new hypotheses generated by the work described. Here is an example of a famous, excellent hypothesis statement; declarative, concise, clear, and testable:

"Equal volumes of gases, at the same temperature and pressure, contain equal numbers of molecules."

Lorenzo Romano Amedeo Carlo Avogadro di Quareqa e di Carreto (Avogadro), 1811
Material and methods (or experimental)
Provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference: only relevant modifications should be described.

Results
A combined Results and Discussion section is often appropriate. Avoid extensive citations and description of published literature.

Results should be clear and concise.

Discussion
This should explore the significance of the results of the work, not repeat them.

Conclusions
The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section. The Conclusion should not be a summary, but should illustrate the advances and claims of innovative aspects of the research work done.

Appendices
If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

Essential title page information

- **Title.** Concise, attractive and informative. The title should not exceed 120 characters excluding spaces and should make clear the focus of the paper and the fact that the focus is within the scope of the journal. Specifically name the carbohydrate polymer or group of carbohydrate polymers that is the main focus of the research. Because titles are used in information-retrieval systems, avoid abbreviations and formulae, avoid general terms when specific ones are available, avoid strings of names. Check for syntax and spelling. If your paper is a review paper, please include the word "review" somewhere in the title.

- **Author names and affiliations.** Where the family name may be ambiguous (e.g., a double name), please indicate this clearly. 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 the e-mail address of each author. Authors must provide and use an email address unique to themselves and not shared with another author registered in EES, or a department. Institutional email addresses, rather than personal email addresses such as gmail, are strongly preferred for all authors who are affiliated to an institution; this is particularly important for the corresponding author.

- **Corresponding author.** Carbohydrate Polymers allows only one corresponding author. Clearly indicate who will handle correspondence at all stages of reviewing and publication, also post-publication. Ensure that telephone and fax numbers (with country and area code) are provided in addition to the e-mail address and the complete postal address. Contact details must be 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.

Highlights
Highlights are mandatory for this journal as they help increase the discoverability of your article via search engines. They consist of a short collection of bullet points that capture the novel results of your research as well as new methods that were used during the study (if any). Please have a look at the examples here: example Highlights.

Highlights 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).

Abstract
A concise and factual abstract is required, and should be a maximum of 150 words in length. The abstract should state briefly the purpose of the research, the principal results and major conclusions. Numerical values for the most important findings should be reported. An abstract is often presented
separately from the article in databases, so it must be able to stand alone. For this reason, vague terms and references should be avoided. Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

**Graphical abstract**
Although a graphical abstract is optional, its use is encouraged as it draws more attention to the online article. The graphical abstract should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership. Graphical abstracts should be submitted as a separate file in the online submission system. Image size: Please provide an image with a minimum of 531 × 1328 pixels (h × w) or proportionally more. The image should be readable at a size of 5 × 13 cm using a regular screen resolution of 96 dpi. Preferred file types: TIFF, EPS, PDF or MS Office files. You can view [Example Graphical Abstracts](#) on our information site. Authors can make use of Elsevier's [Illustration Services](#) to ensure the best presentation of their images and in accordance with all technical requirements.

**Keywords**
Immediately after the abstract, provide a minimum of 3 and maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

**Abbreviations**
Define abbreviations that are not standard in this field or approved by learned societies in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article. Abbreviations, except for very common terms (e.g. DNA, NMR), should not be used in the title of the paper.

**Acknowledgements**
Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

**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.

**Units**
Follow internationally accepted rules and conventions: use the international system of units (SI). If other units are mentioned, please give their equivalent in SI.

**Math formulae**
Please submit math equations as editable text and not as images. Present simple formulae in line with normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text).
Footnotes
Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors can build footnotes into the text, and this feature may be used. Otherwise, please indicate the position of footnotes in the text and list the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

Artwork
Electronic artwork
General points
• Make sure you use uniform lettering and sizing of your original artwork.
• Embed the used fonts if the application provides that option.
• Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman, Symbol, or use fonts that look similar.
• Number the illustrations according to their sequence in the text.
• Use a logical naming convention for your artwork files.
• Size the illustrations close to the desired dimensions of the published version.
A detailed guide on electronic artwork is available on our website: https://www.elsevier.com/artworkinstructions.

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

Formats
If your electronic artwork is created in a Microsoft Office application (Word, PowerPoint, Excel) then please supply 'as is' in the native document format.
Regardless of the application used other than Microsoft Office, 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 all used fonts.
TIFF (or JPEG): Color or grayscale photographs (halftones), keep to a minimum of 300 dpi.
TIFF (or JPEG): Bitmapped (pure black & white pixels) line drawings, keep to a minimum of 1000 dpi.
TIFF (or JPEG): Combinations bitmapped line/half-tone (color or grayscale), keep to a minimum of 500 dpi.

Please do not:
• Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); these typically have a low number of pixels and limited set of colors;
• 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 and Figures
Data used in tables and figures must be legible and relevant to the stated aims of your paper and related to a specific point. Number tables consecutively in accordance with their appearance in the text. Place footnotes to tables below the table body and indicate them with superscript lowercase letters. Avoid vertical rules. Please ensure that the data presented in tables do not duplicate results described elsewhere in the article. Do not exceed a total of 10 tables/figures; any additional figures or tables can be included in the supplementary data. Please note that over half the papers submitted to Carbohydrate Polymers in 2017 were sent back to authors because of poor figure resolution or exceeding the number of figures permitted.
Carbohydrate Polymers requires authors to include tables and figures in the body of the article at the appropriate position, not at the end of the article.
References

Citation in text
All citations in the text should refer to:
1. Single author: the author’s name (without initials, unless there is ambiguity) and the year of publication (Smith, 2003);
2. Two authors: both authors’ names and the year of publication (Smith & Jones, 2004);
3. Three, four or five authors: all authors names and year of publication (Smith, Jones, & Brown, 2005). For all subsequent citations of this work use et al. (Smith et al., 2005).
4. Six or more authors: first author’s name followed by et al. and the year of publication (Black et al., 2007).

Citations may be made directly or parenthetically. Groups of references should be listed first alphabetically, then chronologically. Examples: "as demonstrated (Allan, 1996a, b, 1999; Allan & Jones, 1995; Allen et al., 1994). Kramer et al. (2000) have recently shown...”

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. Using citation 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. If you use reference management software, please ensure that you remove all field codes before submitting the electronic manuscript. More information on how to remove field codes from different reference management software.

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/carbohydrate-polymers

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

Reference style

Text: Citations in the text should follow the referencing style used by the American Psychological Association.

List: references should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters 'a', 'b', 'c', etc., placed after the year of publication.

Examples:
Reference to a journal publication:

Reference to a book:

Reference to a chapter in an edited book:
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. Your article will be checked for plagiarism by the originality detection service Crossref Similarity
Check. If the editors find an unacceptable level of similarity between your article and an existing
paper in any journal, your article will be rejected. In cases of significant similarity, the Editors will
consider further action, including contacting your institution and/or ethics committee.

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.

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](www.elsevier.com/locate/carbpol).

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. During the submission process, after uploading your manuscript, you will have the opportunity to upload your relevant datasets directly to [Mendeley Data](www.elsevier.com/locate/carbpol). 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](www.elsevier.com/locate/carbpol).

**Data in Brief**
You have the option of converting any or all parts of your supplementary or additional raw data into one or multiple data articles, a new kind of article that houses and describes your data. Data articles ensure that your data is actively reviewed, curated, formatted, indexed, given a DOI and publicly available to all upon publication. You are encouraged to submit your article for Data in Brief as an additional item directly alongside the revised version of your manuscript. If your research article is accepted, your data article will automatically be transferred over to [Data in Brief](www.elsevier.com/locate/carbpol) where it will be editorially reviewed and published in the open access data journal, Data in Brief. Please note an open access fee of 600 USD is payable for publication in Data in Brief. Full details can be found on the [Data in Brief website](www.elsevier.com/locate/carbpol). Please use this template to write your Data in Brief.

**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](www.elsevier.com/locate/carbpol).

**Submission checklist**
The following list will be useful during the final checking of an article prior to sending it to the journal for review. Please consult this Guide for Authors for further details of any item.

**Ensure that the following items are present:**
One author has been designated as the corresponding author with contact details:
- E-mail addresses for all authors
- Full postal address
- Phone numbers

All necessary files have been uploaded, and contain:
- Keywords
- All tables and figures (with captions) included in the body of the article
- Further considerations
  - Manuscript has been 'spell-checked' and 'grammar-checked'
  - References are in the correct format for this journal
  - 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 Web)
• Color figures are clearly marked as being intended for color reproduction on the Web (free of charge) and in print, or to be reproduced in color on the Web (free of charge) and in black-and-white in print.

• If only color on the Web is required, black-and-white versions of the figures are also supplied for printing purposes.

For any further information please visit our customer support site at http://service.elsevier.com.

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 Author Services. 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.

Do not contact the editors - they do not have access to this information and will not be able to help you.

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