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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 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.

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, polyactic 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.

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SciSearch
EMBiology
Chemical Abstracts
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GUIDE FOR AUTHORS

INTRODUCTION

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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.

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**PREPARATION**

**Peer review**
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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). 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

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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.
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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.

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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.

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