# CARBOHYDRATE POLYMERS

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

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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.

**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, 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.

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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.

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.

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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; polylactates, 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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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:

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Lorenzo Romano Amedeo Carlo Avogadro di Quareqa e di Carreto (Avogadro), 1811

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