



# CHEMICAL ENGINEERING JOURNAL

An International Journal of Research and Development

## AUTHOR INFORMATION PACK

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Chemical  
Engineering  
Journal



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### DESCRIPTION

The *Chemical Engineering Journal* focuses upon three aspects of **chemical engineering**: chemical reaction engineering, environmental chemical engineering, and materials synthesis and processing.

The *Chemical Engineering Journal* is an international research journal and invites contributions of original and novel fundamental research. The journal aims to provide an international forum for the presentation of original fundamental research, interpretative reviews and discussion of new developments in **chemical engineering**. Papers which describe novel theory and its application to practice are welcome, as are those which illustrate the transfer of techniques from other disciplines. Reports of carefully executed experimental work, which is soundly interpreted are also welcome. The overall focus is on original and rigorous research results which have generic significance.

Within the *Chemical Engineering Journal*, the **Environmental Chemical Engineering** section presents papers dealing with topics in environmental chemical and process engineering. Treatment and environmental separation processes, pollution control and resources recovery, environmental bioprocesses, bioenergy, environmental nanotechnology, clean process technology and waste minimization include the topics which are covered. Papers in which knowledge from other disciplines is integrated with chemical engineering are especially welcome.

Within the *Chemical Engineering Journal*, the **Chemical Reaction Engineering** section presents papers on a wide range of topics including reaction kinetics, applied catalysis, simulation and optimization of different types of reactors, unsteady-state reactors, multiphase reactors, and process intensification including fundamental investigations of the processes of heat, mass and momentum transfer that take place along with chemical reactions. Innovative research works addressing critical areas of **reactor engineering** (e.g. catalysis, novel reactor designs and materials, reactor safety and environmental issues), and emerging reactor technologies (e.g. membrane reactors, chromatographic reactors, unconventional fluidized beds, electrochemical reactors, micro-reactors, photoreactors, fuel-cells, enzymatic reactors, etc.) are particularly welcome. Submissions based entirely on e.g. synthesis and characterisation of novel catalytic material, numerical simulations with commercial CFD codes without novel experimental validation; theoretical mathematics, combustion in the context of energy conversion, or straightforward bioreactor applications (bacteria or animal cells) are highly discouraged, as they will find better fit in other existent journals.

Within the *Chemical Engineering Journal*, the **Novel Materials for Energy and Advanced Applications** section presents papers dealing with different aspects of the preparation and characterization of advanced materials designed for specific applications. This section represents

the evolution of the highly successful Materials Synthesis and Processing section whose scope has been redefined to emphasize the design and application of materials in a number of fields, with energy (harvesting, storage, utilization) occupying a prominent but not exclusive role; manuscripts demonstrating applications of novel materials across multiple fields are welcomed. Manuscripts describing novel methods of synthesis as well as the processes used to obtain materials with different morphologies and/or modify the surface and structural properties of those materials will be considered provided the manuscript is written from a chemical engineering point of view. Manuscripts dealing with micro- and nano-structured materials and/or describing the preparation of composite and hybrid materials with advanced properties are particularly welcome. Given the applied character of the CEJ, we will consider manuscripts where specific applications are demonstrated for the materials synthesized.

Comments and Proposals: We are interested in receiving comments/feedback on this and our other journals and welcome publication proposals for books, electronic products, new journals and co-operation for existing journals.

## AUDIENCE

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Chemical and Process Engineers, Applied Chemists and Product Engineers, Biochemical Engineers and Biotechnologists.

## IMPACT FACTOR

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2018: 8.355 © Clarivate Analytics Journal Citation Reports 2019

## ABSTRACTING AND INDEXING

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BIOSEP Bulletin  
BIOSIS Citation Index  
Cambridge Scientific Abstracts  
Chemical Abstracts  
Chemical Engineering Abstracts  
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## GUIDE FOR AUTHORS

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### INTRODUCTION

**Submission of Papers** Manuscripts should be submitted to one of the following section Editors as defined in the journal Aims & Scope and according to the Editor's specialties. If you are unsure about to whom you should submit a manuscript, please submit it to any Editor in the appropriate section.

*Environmental Chemical Engineering:*

**Stephen Allen:** Adsorption (liquid and gas); Ion exchange; Water treatment (physico/chemical methods); Air/gas treatment, NO<sub>x</sub> control, CO<sub>2</sub> capture; Constructed wetlands and reed beds for water treatment; Agricultural wastes (liquid and solid); Solid waste treatment and bioconversion; Sustainable development or processes

**Tejraj Aminabhavi:** Environmental membrane filtration processes; Emerging pollutant separation and solid-waste minimization; Environmental pollution abatement; Effluent or influent treatment by electrocoagulation and membrane distillation; Toxic metal separation and recovery; Acid/flue gas separation; Desulfurization

**Dionysios (Dion) Dionysiou:** Advanced oxidation processes/technologies (AOPs/AOTs); Photocatalysis; Environmental catalysis ; Membranes processes; Electrooxidation, electrochemical methods ; Particle separation; Separation processes ; Environmental nanotechnology (focus on environmental remediation, environmental sensing)

*Chemical Reaction Engineering:*

**Guy B. Marin:** Chemical kinetics; heterogeneous catalysis; (petro)chemical processes, polymerization, reactor design and modelling, reactor scale-up, crude oil refining, natural gas valorisation, renewables

**Nuno M. Reis:** Micro-reactor technology, fluid mechanics, CFDs, gas-liquid mixing, multiphase reactors, process intensification, biological reactors, biofuels

**King Yeung:** Heterogeneous catalysis (including environmental catalysis, photocatalysis and enzyme), novel and hybrid reactor system, miniature flow reactor and microreactor, green and fine chemistry

*Novel Materials for Energy and Advanced Applications:*

**Todd Hoare:** Functional polymers and polymer nanocomposites; biomaterials and materials for biomedical applications; superhydrophobic/superwetting materials; flame retardant materials; corrosion inhibiting materials; novel encapsulation methods and applications

**Dimitris I. Kondarides:** Materials for energy storage devices (primary and secondary batteries; supercapacitors); materials for solar energy conversion and storage (photo(electro)catalytic water splitting, CO<sub>2</sub> reduction, nitrogen fixation; dye-sensitized solar cells); energetic materials; electromagnetic wave absorbing materials; luminescent materials and phosphors

*Reviews and Perspectives:*

**Jesus Santamaria:** Submissions on Review Articles and Perspectives will be handled by Professor Santamaria.

### *Types of papers*

**The editors make every effort to ensure that manuscripts are fairly and independently reviewed. Submissions which describe novel theory and its application to practice are welcome, as are those which illustrate the transfer of techniques from other disciplines. Reports of carefully executed experimental work which is soundly interpreted are also**

**welcome. Manuscripts of routine studies, however, presenting experimental data but without any significant new interpretation or novelty, or that are very specific and applied in their scope, will be rejected by the editors as "lacking in novel content".**

*Original papers* - these should be complete and authoritative accounts of work, which has a special significance and must be presented clearly and concisely.

*Review articles* - We expect our reviews to be authoritative pieces of work, aimed at describing recent progress in relevant research areas within the scope of the Journal, with the non-expert reader in mind. Rather than attempting a thorough review of the field, authors should concentrate on essential developments, to give a balanced account of the state of the art, discuss key results and provide insight on the perspectives for that research field. Prospective authors of a review article may consult with the Review Editor or one of the other Editors to check the suitability of their topic and material before submitting their review. To keep the review manuscripts concise and readable, as a general rule they should be limited to 10,000 words, 10 figures and up to 150 references.

*Perspectives* - Perspectives are a new type of contribution in the Chemical Engineering Journal. They are meant as short opinion papers addressing a key, often emerging, research area. They should balance the personal view of the author and a reasoned discussion of recent results of great importance. While they often examine the evolution of the field, they are not meant as a mini-review, but as a scholarly discussion that helps to identify new trends and developments in a given field. Perspective manuscripts should contain no more than 3000 words, up to three figures and 60 references. They are always commissioned by the Editor in charge.

*Short communications* - will be accepted for the early communication of important and original advances. Such accounts may be of a preliminary nature but should always be complete and should not exceed the equivalent of 3000 words, including figures and tables.

*Letters to Editors* - raise scientific or technical questions about a published article. They are typically no longer than 1000 words. These letters will be considered for publication only if they contribute an added value or special consideration to a specific article that has already published in the *Chemical Engineering Journal*. Letters-to-the-Editor should be submitted directly to the appropriate Editor by e-mail. Publication and/or peer review of submitted letters will occur solely at the Editors discretion. It should be noted that authors of the original research article will be given the opportunity to publicly respond to any Letter-to-the-Editor should it be accepted for publication.

### **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:

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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

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## **BEFORE YOU BEGIN**

### **Ethics in publishing**

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

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## **PREPARATION**

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

## Article structure

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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.

### *Material and methods*

Provide sufficient details to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarized, and indicated by a reference. If quoting directly from a previously published method, use quotation marks and also cite the source. Any modifications to existing methods should also be described.

### *Results*

Results should be clear and concise.

### *Discussion*

This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

### *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.

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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.

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### Abstract

A concise and factual abstract is required. (An approximate maximum of 250 words should be observed.) 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.

#### 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.

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Immediately after the abstract, provide a 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 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.

#### 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

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