



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

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

IMPACT FACTOR

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Environmental Chemical Engineering:

Stephen Allen: Adsorption (liquid and gas); Ion exchange; Water treatment (physico/chemical methods); Air/gas treatment, NO_x control, CO₂ 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)

Spyros G. Pavlostathis: Environmental biotechnology and bioprocess engineering; Municipal and industrial wastewater biological treatment; Membrane bioreactors; Fermentation and anoxic/anaerobic processes; Anaerobic digestion; Bioelectrochemical systems (MFC, MEC, etc.); Biological nutrient removal/recovery; Bioenergy and biofuels; Biotransformation of emerging organic contaminants; Kinetics, modeling and simulation of bioprocesses

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

Materials Synthesis and Processing:

Jesus Santamaria: materials synthesis processes; shaping processes; micro- and nanostructured materials; hybrid materials; surface modifications

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".

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

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

Reference to a website:

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

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