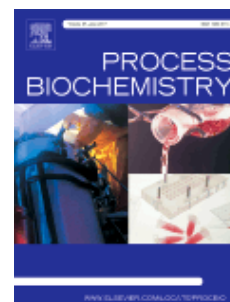




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DESCRIPTION

Process Biochemistry is an application-orientated research journal devoted to reporting advances with originality and novelty, in the science and technology of the **processes** involving **bioactive molecules** and living **organisms**. These processes concern the production of useful metabolites or materials, or the removal of toxic compounds using tools and methods of current **biology** and **engineering**. Its main areas of interest include novel **bioprocesses** and enabling technologies (such as nanobiotechnology, tissue engineering, directed evolution, metabolic engineering, systems biology, and synthetic biology) applicable in food (nutraceutical), healthcare (medical, pharmaceutical, cosmetic), energy (biofuels), environmental, and biorefinery industries and their underlying biological and engineering principles.

Main topics covered include, with most of possible aspects and domains of application:

- Fermentation, biochemical and bioreactor engineering
- Biotechnology processes and their life science aspects
- Biocatalysis, enzyme engineering and biotransformation
- Downstream processing
- Modeling, optimization and control techniques.

Particular aspects related to the processes, raw materials and products, also include:

- Quantitative microbial physiology, stress response, signal transduction
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- Proteomics, functional genomics, metabolomics, and bioinformatics
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- Mass transfer, mixing, scale-up and scale-down, bioprocess monitoring, bio-manufacturing
- Cell, tissue and antibody engineering: animal and plant cells/tissues, algae, micro-algae, extremophile, antibody screening and production
- Environmental biotechnology: biodegradation, bioremediation, wastewater treatment, biosorption and bioaccumulation
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- Bioseparation, purification, protein refolding.
- Other new bioprocess and bioreactor related topics especially on application to healthcare sectors

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INTRODUCTION

Process Biochemistry is an application-orientated research journal devoted to reporting advances with originality and novelty, in the science and technology of the processes involving bioactive molecules and living organisms. These processes concern the production of useful metabolites or materials, or the removal of toxic compounds using tools and methods of current biology and engineering. Its main areas of interest include novel bioprocesses and enabling technologies (such as nanobiotechnology, tissue engineering, directed evolution, metabolic engineering, systems biology, and synthetic biology) applicable in food (nutraceutical), healthcare (medical, pharmaceutical, cosmetic), energy (biofuels), environmental, and biorefinery industries and their underlying biological and engineering principles.

Main topics covered include, with most of possible aspects and domains of application: cell culture and fermentation, biochemical and bioreactor engineering; biotechnology processes and their life science aspects; biocatalysis, enzyme engineering and biotransformation; and downstream processing.

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[2] Stephanopoulos GN, Aristidou AA, Nielsen JE. *Metabolic engineering: principles and methodologies*. New York: Academic Press; 1998. p. 494

[3] Zhong JJ, Yoshida T. Rheological characteristics of suspended cultures of *Perilla frutescens* and their implications in bioreactor operation for anthocyanin production. In: Ryu DDY, Furusaki S editors. *Advances in Plant Biotechnology*. Amsterdam: Elsevier Science; 1994. p. 255-279.

[4] Lima R, Salcedo, RL. An optimized strategy for equation-oriented global optimization. In: Grievink J, Schijndel JV. editors. *10th European Symposium on Computer Aided Chemical Engineering*. New York: Academic Press; 2002. p. 913-918.

[5] Curtin CD. Towards molecular bioprocessing as a tool to enhance production of anthocyanins in *Vitis vinifera* L. cell suspension culture. Australia: Flinders University; Ph.D. thesis; 2004. p.250.

[6] Snow-Brand-Milk-Prod. Lysozyme purification by affinity chromatography on crosslink chitosan sulfate. Jpn. Patent. JP 05260-966. 92.03.24.

[7] Enfors SO, editor. Physiological stress responses in bioprocesses. *Advances in Biochemical Engineering/Biotechnology*. vol. 89. Berlin: Springer; 2004. p. 244.

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

Reference to a chapter in an edited book:

[3] 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:

[4] Cancer Research UK, Cancer statistics reports for the UK. <http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/>, 2003 (accessed 13.03.03).

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