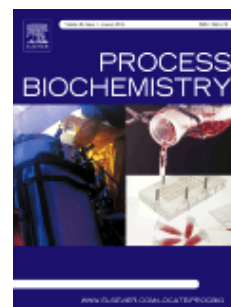




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DESCRIPTION

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.

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- Mass transfer, mixing, scale-up and scale-down, bioprocess monitoring, bio-manufacturing
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- Environmental biotechnology: biodegradation, bioremediation, wastewater treatment, biosorption and bioaccumulation
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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.

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[1] Hsieh C, Hsu TH, Yang FC. Production of polysaccharides of *Ganoderma lucidum* (CCRC36021) by reusing thin stillage. *Process Biochem* 2005;40:909-916.

[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.

[8] Schweder T, Hecker M. Monitoring of stress response, In: Enfors SO, editor. Physiological stress responses in bioprocesses. Advances in Biochemical Engineering/Biotechnology vol. 89. Berlin: Springer; 2004. p. 47-71.

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