Special Issue

Biotransformation Catalyzed by Immobilized Enzyme

Message from the Guest Editors

Biotransformations catalyzed by immobilized enzymes represent a fascinating research and development area. The targeted advantages of immobilization are: (i) Easy recovery/separation of the biocatalyst from the reaction mixture; (ii) Easy recycling through multiple runs; (iii) Improved stability versus process parameters, such as temperature or pH; (iv) Continuous flow reactors such as packed bed reactors in order to suppress inhibition of the enzyme by the reaction product(s) while getting full conversion and pure products. We therefore invite you to submit your current work in this area, but also in the adjacent fields such as: (i) Biotransformations catalyzed by immobilized enzymes in anhydrous solvent (organic, supercritical, eutectic, ionic); (ii) Use and up-scalability in a reactor and/or recyclability; (iii) Process intensification involving immobilized enzymes; (iv) Production cost and eco-compatibility (lifecycle assessments, etc.). The following keywords are a guideline: enzyme immobilization, enzyme recycling, enzyme carrier interaction, continuous reactions, biocatalytic cascades, non-aqueous reaction systems, downstream processing, lifecycle assessment.

Guest Editors

Prof. Dr. Ulf Hanefeld

Biocatalysis & Organic Chemistry, Delft University of Technology, Delft, The Netherlands

Dr. Yann P. Guiavarc'h

1. Biological & Food Engineering, University of Lorraine (UL), 54000 Nancy, France
2. The Reactions and Chemical Engineering Laboratory (LRGP), National Center for Scientific Research, 75016 Paris, France

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
catalysts@mdpi.com

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Prof. Dr. Keith Hohn
Carl R. Ice College of Engineering, Kansas State University, Manhattan, KS, USA

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