



## **Biocatalysis and Whole-Cell Biotransformation in Biomanufacturing**

Guest Editors:

**Prof. Dr. Anwar Sunna**

Department of Molecular  
Sciences, Macquarie University,  
Sydney, NSW 2109, Australia

[anwar.sunna@mq.edu.au](mailto:anwar.sunna@mq.edu.au)

**Prof. Dr. Richard Daniellou**

Institut de Chimie Organique et  
Analytique (ICOA), Université  
d'Orléans UMR-CNRS 7311, BP  
6759, rue de Chartres, 45067  
Orléans CEDEX 2, France

[richard.daniellou@univ-orleans.fr](mailto:richard.daniellou@univ-orleans.fr)

Deadline for manuscript  
submissions:

**28 February 2021**

### **Message from the Guest Editors**

Dear Colleagues,

Enzyme technology and biocatalysis has become a prominent field in synthetic biology and “green” organic synthesis of chemicals due to the increased demand for environmentally friendly biomanufacturing. Global trends towards sustainability, the reduction of organic waste, and landfill avoidance are driving the demand for greener products with improved properties. Accordingly, the field of enzyme technology and biocatalysis (multi-enzymes and whole-cells) has become a primary focus for the synthesis of bio-based chemicals and high-value compounds. In this Special Issue of *Catalysts*, we would like to highlight these current advances with special emphasis on the following areas:

1. Structure–function analysis and enzyme optimization;
2. Enzymatic and whole-cell biotransformation;
3. Cascade reactions and co-immobilization of enzymes;
4. Strategies for enzyme stabilization and biocatalytic applications;
5. Design of novel biocatalytic modules for enhanced transformation of biological waste products;
6. Assembly of functional multi-enzyme pathways.

