

Biocatalysis

A Special Issue from
Microbial Biotechnology

Editors: **Karl-Erich Jaeger, Andreas Schmid, Manuel Ferrer and Kenneth N. Timmis**

Biocatalysis exploits natural catalysts, enzymes, cell fractions and whole cells, to perform chemical transformations of given substrates to desired products, and has been exploited effectively by industry for decades. With the advent of powerful mutagenic methods to create variants of known enzymes, and metagenomics to harvest the diversity of enzymes from currently unculturable microbes, the means of exploring the extent of enzymatic diversity space is in our hands. This coupled with advances in structure/function analysis and novel techniques to study enzymatic mechanisms is not only providing the basis of an understanding of underlying evolutionary mechanisms and the forces driving evolution, but also novel biocatalysts for biotechnological applications.

This Special Issue aims at capturing the latest advances in the field of biocatalysis and will include in its scope:

- Identification and characterization of novel enzymes
- Bioinformatic exploration of enzymatic space in metagenomes
- Experimental evolution of new properties and stereocenters
- Enzymatic kinetic resolution and asymmetric biosynthesis
- *In vitro* compartmentalization
- Biocatalysis with enzymes and whole cells in non-aqueous media
- Thermodynamics of biocatalytic processes
- Novel biocatalytic routes and processes
- Tools and systems for biocatalyst production

Submit your manuscript online at
<http://mc.manuscriptcentral.com/microbio>

Deadline for submissions: April 1st 2009

Publication date: November 2009

society for applied
sfam
microbiology

 **WILEY-
BLACKWELL**