



Environmental Biocatalysis: From Remediation to Waste Valorization

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Message from the Guest Editors

Dear Colleagues,

Bioremediation is an attractive bioprocess utilizing microorganisms or their enzymes for the detoxification or even mineralization of xenobiotics. The search for novel enzymatic activities that could break down persistent organic pollutants is of the outmost significance, a process called bioprospecting. Today, this process has been advanced due to the improvement in omics technologies and synthetic biology, which provide an enormous amount of data available for genome and metagenome mining, as well as the creation of efficient artificial pathways. Novel enzymatic activities may have unique characteristics for the degradation of pollutants, as well as high chemo-, regio- and stereo-selectivity for the modification of aromatic and/or halogenated compounds. Such enzymatic activities will constitute a greener alternative to organic synthesis, providing a mild process with lower energy requirements, while reducing or eliminating the formation of byproducts that might be hazardous to human health and the environment. Submissions are welcome in the form of original research papers or short reviews providing a new insight in the area of environmental biocatalysis.

