

Special Issue

Biochar-Driven Nutrient Circularity in Wastewater: From Reactivity to Agronomic Reuse

Message from the Guest Editors

The use of biochar for wastewater treatment, in general, and, particularly, for nutrient recovery, is a key step towards sustainability promotion and circular economy boosting. Usually, raw biochars have low nutrient recovery capacities from wastewater. For this reason, various physico-chemical modification options have been tested, including ball milling, the use of steam, acid and alkaline solutions, and metal salts-based byproducts. Recent works have shown that the success of wastewater nutrient recovery from wastewater depends not only on the biomass nature (i.e., lignocellulosic biomass, animal manure, and sewage sludge), but also on the pyrolysis conditions (i.e., pyrolysis temperature and residence time) and the adsorption settings (i.e., wastewater quality, biochar dosage, and contact time). Therefore, innovation in appropriate biochar synthesis and effective application for nutrient recovery from wastewater and in agriculture is crucial. This Special Issue welcomes high scientific level experimental works regarding the conversion of abundant biomass into effective biochar that can efficiently recover nutrients from wastewater and subsequently be used in agriculture.

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In the context of global changes, the sustainable management of water cycles, going from global and regional water cycles to urban, industrial and agricultural water cycles, plays a very important role on the water resources and on their relationships with food, energy, biodiversity, ecosystem functioning and human health. *Water* invites authors to provide innovative original full articles, critical reviews and timely short communications and to propose special issues devoted to new technological and scientific domains and to interdisciplinary approaches of the water cycles. We ensure a critical review process and a quick turnaround between submission and final decision.

Editor-in-Chief

Dr. Jean-Luc PROBST

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