Special Issue

Urban Sewage and Sludge: Treatment and Reuse

Message from the Guest Editors

Fast urbanization gives rise to enormous amounts of municipal wastewater generated from the human diet, which are discharged to municipal wastewater treatment plants. After undergoing aerobic and anaerobic treatment, an equivalent volume of sewage sludge (SS) in the form of a solid cake with approximately 78% moisture content is ultimately produced. With the upsurge of the carbon neutrality campaign, transforming SS into valuable products in an efficient and sustainable way has become an urgent challenge for the wastewater industry. Extensively reported studies have demonstrated that the considerable amount of phosphorus (P), an essential and non-renewable element for life, in SS can be extracted to alleviate pressure on the supply chain of phosphate rocks.

However, before exploiting this P resource from SS, inherent hazardous substances such as heavy metals (HMs) need to be addressed. Therefore, seeking a simple, efficient, and process-tunable approach to mining and reusing the P contained in SS while taking into account the prospective ecological risks induced by those accompanying HMs holds the potential to maximize the resource value of SS beyond waste.

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Deadline for manuscript submissions

closed (25 July 2025)

Water

an Open Access Journal by MDPI

Impact Factor 3.0
CiteScore 6.0

mdpi.com/si/226415

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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.

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