

Sewage Sludge Disposal: State-of-the-Art Technologies for Sustainable Energy and Resources Recovery

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Quantities of excess sewage sludge from wastewater processing are increasing globally, with potentially severe environmental consequences linked to its disposal. At the same time, traditional disposal methods are being more closely regulated or ruled out altogether, while sustainability and regulation considerations require that embedded resources should be recovered from this waste stream. This paper presents an in-depth review of sludge-to-energy recovery routes with emphasis on recent developments in research and applications, as well as on the benefits and limitations of various applicable technology for ensuring sustainability and environmental efficiency.

The paper focuses on viable sludge conversion processes and technologies used for energy and materials recovery from sewage sludge by critically analysing current literature and presenting and comparing possible management scenarios.