

Bioresource Technology: Special Issue on Waste-to-Resources: Opportunities and Challenges

The global population is expected to reach nearly 9.7 billion by 2050 from current population of 7.7 billion. The rising population will significantly increase the demand for resources such as food, feed, biofuels, etc. with concomitant generation of large quantity of residues and wastes (water). As per the recent World Bank report, nearly 2,017 million metric tons of waste was generated in 2018 worldwide and is expected to increase to 2,586 million metric tons and 3,401 million metric tons in 2030 and 2050, respectively. Nearly 40-50% of these wastes compose of organic matter. With stringent regulation on disposal of organic wastes in landfill coupled with several environmental concerns such as greenhouse gases (GHGs) emissions, surface water and groundwater contamination, odor emanation, transmission of vectors via birds and insects, there has been significant efforts to eliminate or reduce the disposal of organic wastes into landfill. At the same time large amounts of liquid and gaseous wastes are also generated as a result of our increasing demand for resources. Thus, there is a critical need to valorize these waste streams into plethora of useful resources including food, feed, fuels, biochemicals and biomaterials among other through physical, chemical and biological routes. This special issue entitled “Waste-to-Resources: Opportunities and Challenges” has been conceptualized to highlights some of the advances in the field. We are especially interested in the high-quality contributory research papers and state-of-the-art critical reviews (only by invitation) on the following topics dealing with recovery of resources from solid, liquid and gaseous wastes:

- 1- Biofuels
- 2- Platform chemicals including biosurfactants, biopesticides etc.
- 3- Nutraceuticals and other high-value chemicals
- 4- Organic acids including medium chain carboxylic acids
- 5- Recovery of nitrogen and phosphorus
- 6- Bioplastics and biopolymers
- 7- Biochar/hydrochar and activated carbon with environmental applications (except agronomic applications)
- 8- Sustainable approaches for industrial/agri-processing waste (water) treatment with recovery of resources

Timeline

Submission opens on Sep 1, 2019

Submission closes on Sep 30, 2019

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