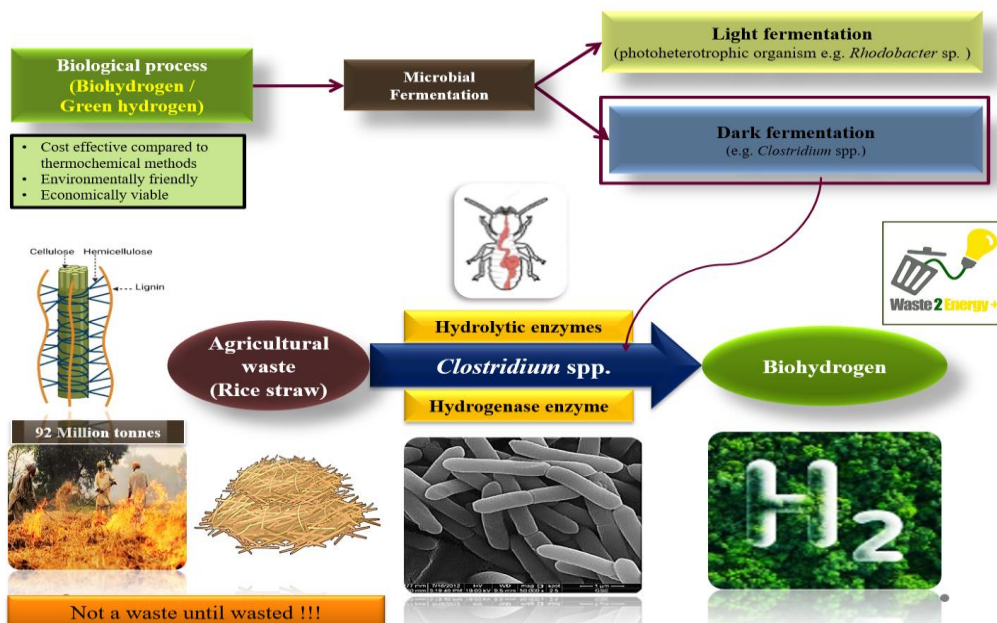


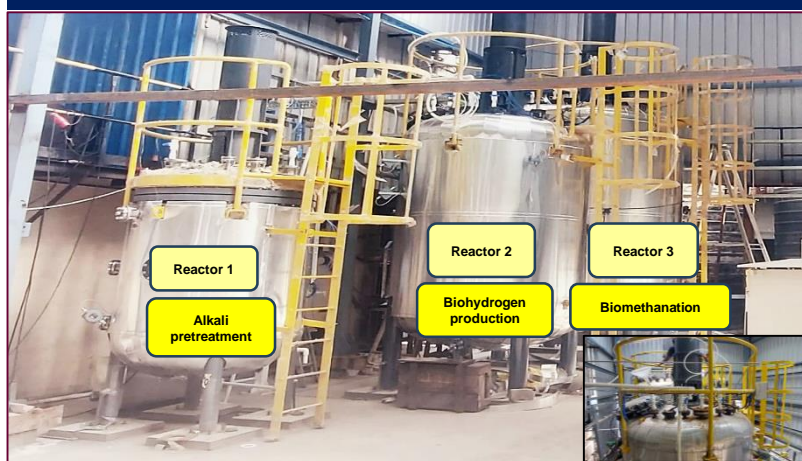
Tech-Transfer to KPIT Technologies Ltd.

KTLARI StrawH2Gen: Biohydrogen, a fuel for future



Utilization of agricultural wastes as biohydrogen feedstock could effectively turn waste into treasure and achieve the purposes of energy conservation and pollution reduction. This sustainable microbial process developed for the biohydrogen production from rice straw can facilitate decentralized production of biohydrogen reducing the transportation cost and increasing the techno-economic viability of the process and pave way for an increase in technologies for biohydrogen production

Large scale anaerobic digestion setup



Process operation	
Temperature	-30° C
pH	5.5 - 6
Hydraulic Retention Time	10 days

Anaerobic digestion	Productivity (continuous mode)
Biohydrogen production	~60 L/kg TS per day (feed added)
2 nd stage bio methanation	~260 L/kg TS per day (feed added)
Hydrogen yield after steam reformation of 260L/kg CH ₄	546L of H ₂ / 260L CH ₄ (Efficiency of SMR (~70%))
Hydrogen yield after steam reformation of 1L Methane	2.1 L of H ₂ /L CH ₄ (Efficiency of SMR (~70%))
Total Hydrogen yield per kg rice straw	606 L/kg TS per day (feed added)

