Improved water management system for toxic textile effluents developed

The technology has resulted in the recuperation of 50% of the treatment cost incurred from conventional processes for water treatment.

The process results in maximum colour removal and meets inland water discharge standards.

The DST - Water Technology Initiative (WTI), along with the Indian National Academy of Engineering (INAE) - supported the development of this technology at pilot-level in collaboration with Laxmi Textile Prints, Jaipur.

Low-cost solution
It is a direct replacement of the existing treatment plant processes and consists of a low-cost solution of dye adsorption on acid-modified soil, followed by a photocatalytic reaction step in a photocatalytic visible light filter and a unique carbon and PAN (polyacrylonitrile) nano-fibre filtration process.

Having been set up on a pilot basis, it remediated industrial wastewater.

The technology has resulted in the recuperation of 50% of the treatment cost incurred from conventional processes for water treatment (especially due to the high cost of sludge disposability) in the water-scarce regions of Rajasthan. Further, scaling up of this plant to 100 kilolitres/day capacity to meet the current industrial requirement is underway, it added.