

## IIT-K develops novel nano adsorbent technology for waste water treatment

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**The nano-adsorbents have unique physicochemical properties that can deactivate and separate antibiotic-resistant bacteria from water**



In a path-breaking development to address the problems of rising pathogens and waterborne diseases due to antibiotic & metal-resistant bacteria, Dr Archana Raichur and Dr Niraj Sinha from the Dept. of Mechanical Engineering, Indian Institute of Technology Kanpur (IIT-K) have invented a novel nano-adsorbent having applications in waste water treatment.

The nano adsorbent would help in selective removal of anti-biotic and metal resistant bacteria from polluted water with a rapid method to synthesize.

The uniform cubical nano-adsorbent is eco-friendly, reusable, bactericidal, and multi-layered, and is functionalized for selective removal of harmful bacteria from water.

It is a significant development with regards to the current methodologies used to synthesize nano-adsorbents that have been researched in recent years for waste water treatment to address water pollution and related health concerns.

These nano-adsorbents have potential in near future to be used as a component of membrane filters and tested for clinical evaluation and application on bio-remediation which is ready to be commercialised.