

IIT Delhi technologies in water purification

IIT Delhi has the following technologies on water purification. For more details write to fittlicensingteam@gmail.com

1. MYCO-Capsules for Bio remediation of waste water and Method for preparation of myco-tablets for bioremediation and myco-tablets thereof

Highly efficient mycotablets and capsules for bioremediation. A method for preparation of myco-tablets with high biological and physical efficiency with long preservation time and short activation time. Product has improved viability, dye removing efficiency, hardness, friability and disintegration time. Very helpful in treatment of waste water.

2. A polyacrylonitrile ultrafiltration membrane for removal of arsenic and chromium.

The invention relates to a polyacrylonitrile ultrafiltration membrane and a process of preparation of the membrane. It is useful for removal of arsenic and chromium from potable water with low operating pressure mild treatment conditions without using chemicals.

3. PVA supported resins for arsenic separation and product thereof

A cost effective crosslinked thiolated PVA for removal of arsenite from water. The resin is also antifungal and can be regenerated. A method of production is also part of the invention.

4. An apparatus and a process for removal of arsenic

An apparatus for removal of arsenic from ground water and wastewater, that is safe and easy to handle. The apparatus is cost effective, highly efficient and regenerative.

5. Recyclable Smart Mesh for on Demand Separation of Oily Water

It relates to production of nanostructured smart surface mesh with reversible wetting properties for separation of oil and water from oily water. The mesh is recyclable, thus eco-friendly. It is also efficient and cost effective. It works both in water-removing mode as well as oil-removing mode to separate both light and heavy oils from water.

6. A nano-adsorbent for removal of Lanthanide ions from water and associated methods.

A nano-adsorbent for removal of lanthanide ions from water comprising nanoparticles of Methylendiphosphonic acid - aminopropyl silica (MDPA-

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APS) or nanoparticles of Malonic acid - aminopropyl silica (MA-APS) and associated methods of using the nano-adsorbent, regenerating the used nano-adsorbent, and recovery of lanthanide ions from the nano-adsorbent.

7. Polyelectrolyte gels for sorption of crude oil and its emulsions with sea water and deionized water and its process thereof

It covers a macro-porous pH responsive polyelectrolyte gel for sorption of crude oil and its emulsions and the process of making the same. The developed polyelectrolyte gel showed direct response in relation to pH, remarkable reusability feature, and considerable strength during swelling and collapse cycles. The developed polyelectrolyte gel are applicable in sorption of very stable water in crude oil emulsions which are formed due to weathering of spilled oil in a marine environment.

8. An apparatus and method for mobile-phone based water purification

A cost effective handheld sterilization device and method for sterilization of samples which is quick and effective against a wide range of microorganisms

9. Antimicrobial non-woven fabric for safe water filtration

The present innovation relates to an antimicrobial non-woven fabric for water filtration, which is cost-effective and has controlled leaching rate of the antimicrobial agents in water so that the drinking water contains permissible limits of such antimicrobial agents.

10. Water purification system

A water purification system that removes suspended solids, turbidity, and microorganisms present in supplied water. This water purification system will involve low level of mechanization, be less complex, more sustainable and will not require electrical power as well.