

SECTOR ENVIRONMENT - (SOIL, WATER, AIR)

Nanotechnology enhance environmental quality and sustainability through pollution control, prevention and remediation.

Soil and Water

1. Remediation of ground water with Aluminum oxide nanofibers (2nm).
2. Remediation of high phosphates in Aqueous environments - ponds, fishing ponds, aqua culture and water bodies and under ground water reservoirs to prevent algal growth by nanolanthanum.
3. Cleaning of soil and ground water by nanoiron.
4. Remediation of water contaminates with Radionuclide Cs137 and Sr90.
5. Removal of arsenic from drinking water by nanoiron for which there is no effective remedy today.
6. Water filter with aluminum oxide nanofibers to filter viruses, bacteria and protozoan cysts.
7. Water filtration unit with nanolanthanum.
8. Remediation of waste water containing mercury arsenic and lead by nanoscale bio polymers.
9. Remediation of water with organic pollutants by SEN (Single Enzyme Nanoparticles)

AIR

1. Removal of volatile organic compounds from industrial smoke stacks by manganese dioxide.
2. Removal of carbon dioxide from industrial smoke stacks by carbon nanotubes.
3. Removal of pollutants from vehicle / engine / exhausts by platinum - palladium - gold catalyst.
4. Reduction of carbon dioxide from concrete walls
5. Control of nitrous oxide (GHG) by SWANTS.
6. Antipollution coatings in the interior of vehicles, glass, coatings, exterior of buildings, curtains, mirrors, metal surfaces and aero plane bodies by modified platinum doped TiO₂ for self cleaning (antimold antibacterial).
7. Aerosols - Coating to remove smell and easy to carry - nano TiO₂ + propel agent (DMS) size 8nm.
8. Cleaning of clothes by photocatalysis by TiO₂