NANO BUBBLE TECHNOLOGY- SCIENCE & TECHNOLOGY

NEWS: Nano Bubble Technology was launched by the Union Minister of State for Forest, Environment, and Climate Change at the National Zoological Park, Delhi, offering a groundbreaking approach to water purification.

WHAT'S IN THE NEWS?

What is Nano Bubble Technology?

- **Brief:** It is a cutting-edge method of **improving water quality** by using incredibly tiny bubbles, called nanobubbles. These bubbles are so small (**less than 200 nanometers in diameter**) that they are invisible to the naked eye.
- **Working:** Unlike regular bubbles that rise to the surface and pop, nanobubbles remain suspended in the water for a long time. This allows them to interact with pollutants and break them down.
    - Nanobubbles have a strong negative charge, which helps them attract and break down impurities in the water. They can remove algae, organic waste, and even oil and grease.
    - Nanobubbles can also increase the amount of oxygen dissolved in the water.

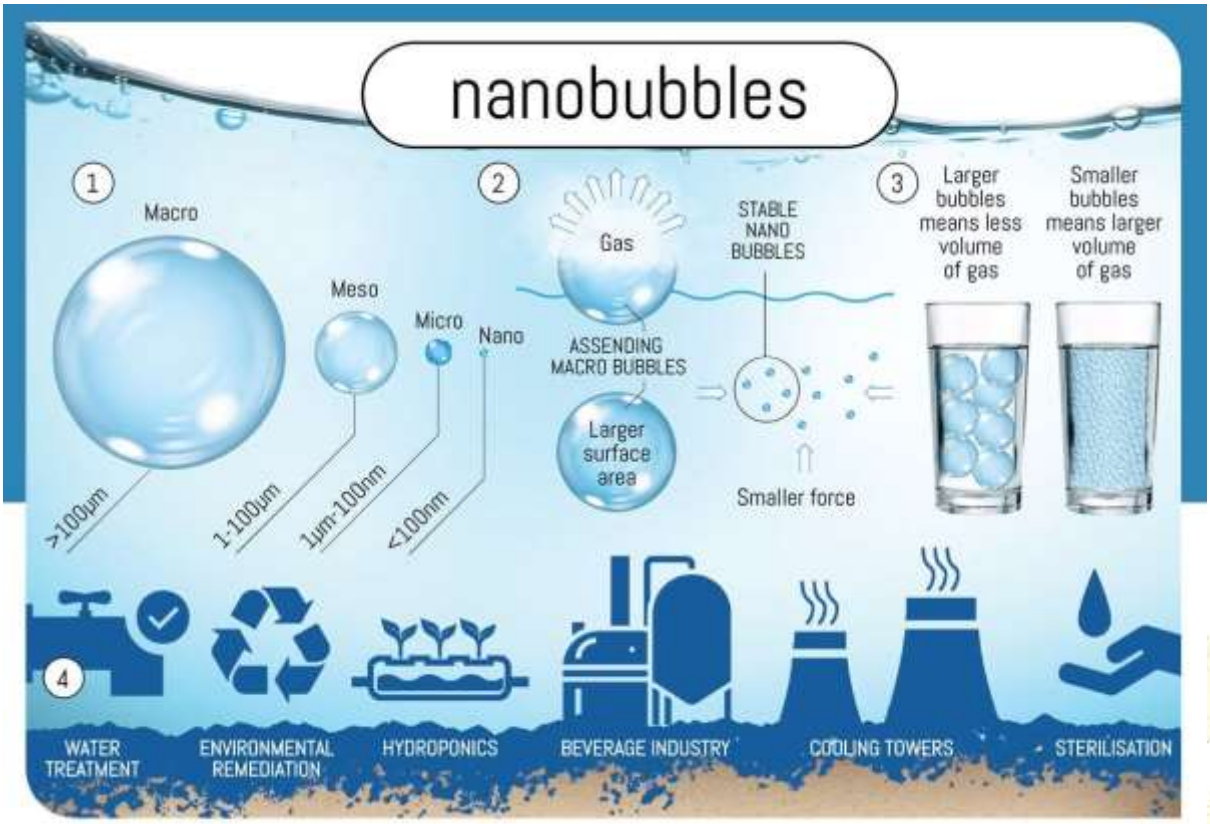
Advantages over Traditional Methods

- Chemical-free approach to water purification, making it environmentally friendly and safe for aquatic life.
- Nanobubble technology can be more energy-efficient, reducing operational costs.
- It can be applied to various water bodies, including lakes, ponds, aquariums, and even wastewater treatment plants.

Applications beyond Water Purification

- Nanobubbles can enhance plant growth by improving oxygen delivery to roots and increasing nutrient uptake.
- There's growing research on using nanobubbles for drug delivery, medical imaging, and even cancer treatment.

- Applications include cleaning industrial equipment, improving fermentation processes, and enhancing oil recovery.



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