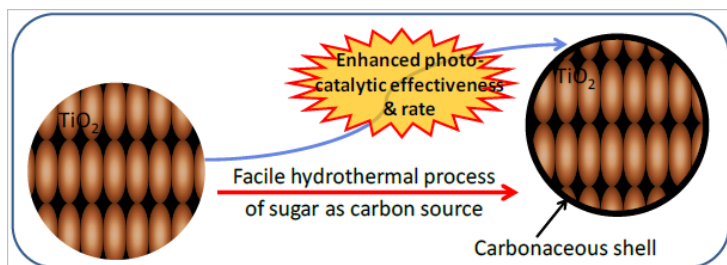




With increased pollution of ground and surface water, supply of fresh potable water for human use is becoming highly restricted. As a result, there is a growing need for developing innovative technologies and new materials that can provide safe drinking water at affordable cost.

Photocatalysis is one such treat water treatment method that uses easily available energy, such as sunlight, and particularly inexpensive photocatalysis agents, such as titanium dioxide (TiO₂), to decontaminate water from microorganisms, and make it safe to drink. However, the low adsorption capacity of such agent in holding pollutants reduces its decontamination efficiency, because microorganisms regrow if not removed from purified water. On the other hand, traditional adsorbents cannot be used since they lack in decontamination capabilities.

This invention addresses a method of developing transition metal oxide (or sulfide) based photocatalyst that enhances both decontamination efficiency and rate. Additionally, the photocatalyst is remarkably cost-effective and reusable.



(image source: inventor)

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Heterogeneous core @ shell photocatalyst

Competitive Advantages

- Superior properties of rapid adsorption and effective decomposition
- Cost effective production
- Reusability aspects

Commercial Applications

- Easy implementation at lead water treatment plants

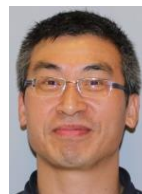
IP Status

- Patent pending
- Licensing available

Status of Development

- Prototyping stage

Lead Inventor



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