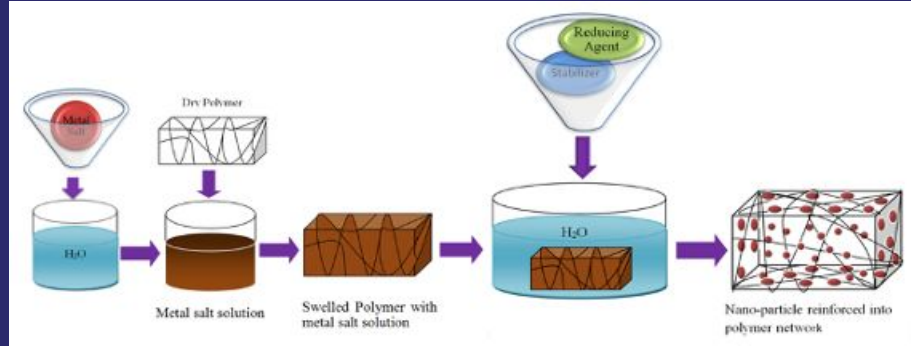


Granted IN455508

Nanoparticles reinforced hydrogel composite



NEED

Existing polymer composites lack reversible release mechanisms and precise control over drug delivery, leading to potential burst release issues.

SOLUTION

The invention presents a hydrogel nanocomposite with gold nanoparticles, offering controlled drug release under light stimuli.

INNOVATION

The integration of gold nanoparticles into the hydrogel enables reversible volume alteration, avoiding toxic chromophores, and preventing photo degradation of therapeutic agents.

MARKET ANALYSIS

Market: Drug Delivery Systems

CAGR: Significant, driven by advanced drug delivery needs.

Potential Indian Clients: Pharmaceutical companies, hospitals, research institutions.

WHY INVEST?

Photo sensitivity

Double networked hydrogel

Metal nanoparticles

On-demand drug release

AT A GLANCE

- Current TRL NA
- Funded by NA
- IPC A61K, A61L, B82Y
- Domain
Biomedical Engineering



For more information, reach out to (contact person), (designation), (organization) at (email ID) and (phone number)



Bhakat Tamalika, Belgamwar Sachin
Ulhasrao, Agarwal Ajay, Sharma Niti
Nipun

Department of, Mechanical Engineering
BITS Pilani, Pilani Campus

