

Graphene Oxide Nanocomposite Filtration

SUMMARY

The University of Texas at El Paso seeks a partner for licensing a novel polyethersulfone ultrafiltration membranes containing graphene oxide (GO) nano-platelets.



TECHNOLOGY

This invention uses GO as an antifouling agent in polyethersulfone membranes. Increasing GO concentration can increase viscosity leading to reduced pore radius and porosity and consequently reduced pure water flux. In addition, GO also increases the hydrophilic nature of the nanocomposite filter, allowing a greater pure water throughput.

ADVANTAGES

- Increased hydrophilic action
- Increased reusability of the membrane
- Decreased pore size
- Wide range of contaminants removed
- Chemical resistant nature suitable for cleaning with chlorine solution



APPLICATION

- Water treatment
- Petrochemical
- Pharmaceutical

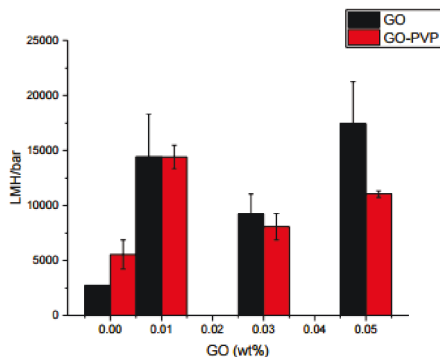



Figure: The pure water flux through the nanocomposite filter as it relates to the amount of graphene oxide present in the nanocomposite

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PATENT STATUS

Patent Pending