

The Capability

IMRE scientists have developed high adsorptive capacity and low-cost inorganic layered materials that can be coated on substrates of various materials and sizes through low cost solution-based processes.

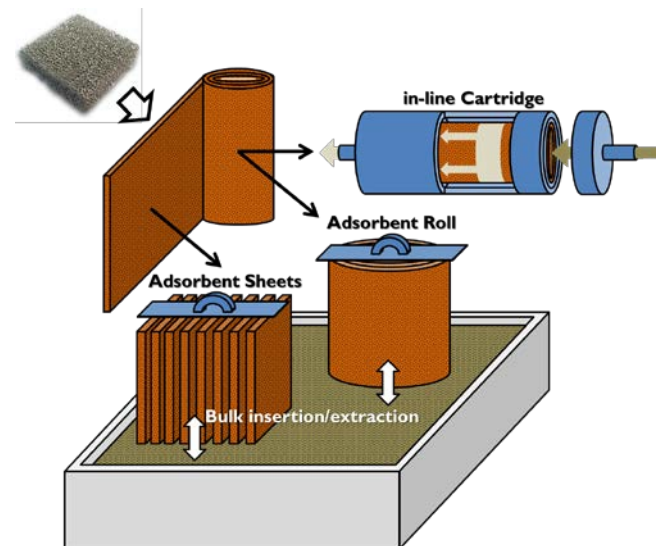
Such IMRE-proprietary coatings, when integrated into a water treatment device, for example, could remove organic dyes and heavy metal pollutants effectively.

Key Features of IMRE-proprietary Coating

- Can be carried out at room temperature using large area, solution-based coating processes such as dip coating, sol gel, electrodeposition, etc.
- Has high adsorptive capacity (>100mg/g) due to its high porosity.
- Can be incorporated into an IMRE-designed adsorbent device without the need for physical encapsulation and filtration or entrapment of the adsorbent materials as the materials are not in particulate form.

Potential Applications

- Improve or simplify water filtration system design which could lead to cost savings.
- Retro-fit current water filtration system for a more effective way to filter water with added purification effects.



Example of how adsorptive coating can be integrated into adsorbent devices and the possible use of such devices in water treatment.

Collaboration Opportunities

- Partner with manufacturers of adsorbents and devices to scale up device.



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