

Applications

- Batteries
- Electromagnetic isolation coating
- Anticorrosive materials
- Paint

Advantages

- Reduced amount of anticorrosive agents
- Extended service life
- More efficient and lighter coatings

Inventors

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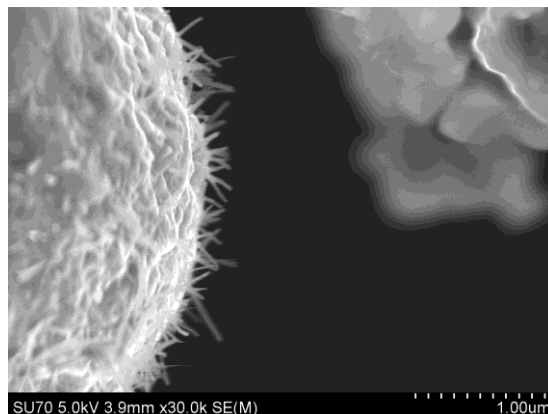
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Market Need

Zinc is a transition metal with strong reducing properties that has found application in batteries and as an anti-corrosion agent. Being applied on the surface of metal, zinc gradually oxidizes and loses its electrical contact, resulting in loss of cohesion of the binder and flaking, leading to expensive maintenance work. Therefore, maintaining integrity of zinc-containing coating for corrosion protection will lead to reduced maintenance costs.

Technology Summary

This is an improved method of linking carbon nanotubes and trapping zinc particles within carbon nanotube networks to create lighter and more durable anticorrosive materials. The procedure consists of several carbon nanotubes modification steps that allow creation of carbon/zinc composites that exhibits superhydrophobic properties. Materials containing zinc particle trapped within carbon nanotube network would maintain their integrity even after zinc has been oxidized, increasing their efficiency and extending their service life. Figure presents SEM image of a Zn particle after catalytic reaction with modified carbon nanotubes.



Technology Status

Patent pending: U.S. and foreign rights available.

This technology is available for licensing to industry for further development and commercialization.