Double-glass component anti-fouling ability

How do antifouling coatings work?
Currently,the antifouling mechanism of the most widely used antifouling coatings is based on toxic metal ions and fungicides to repel or kill organisms close to the coating. However,the damage to non-target organisms and the marine environment are also caused by these coatings [266,269].

What is antifouling coating based on antifoulant?
Antifouling coating based on antifoulant is one of the most widely applicated marine antifouling coatings,which can achieve antifouling effect by killing or stimulating fouling organisms.

What are the problems of antifouling hydrogel coating?
The main problems are as follows: (i) The adhesion property of antifouling hydrogel is poor,and the hydration layer of the hydrogel coating will limit its long-term adhesion on the surface of the substrate,especially facing a large area of coating,this problem is particularly prominent.

What is an example of a hydrogel based antifouling coating?
For example,Tian et al. prepared a hydrogel hybrid silicone-based antifouling coating by the mixture of commercial silicone-based PDMS coatings,hydrophilic polymer chains and silver nanoparticles (Fig. 15 A).

Building upon the aforementioned research on hydrogel marine coatings, this study introduces an innovative acrylic resin-hydrogel double-layer (A-H DL) marine anti-corrosion ...

Optical instruments, electronic products, and medical fields urgently require the development of robust and transparent anti-fouling coatings. However, traditional coatings often struggle to ...

In recent years, the demand for transparent substrates (e.g. windows, mirrors and photovoltaic glass) with anti-fogging performances has increased, while conventional anti ...

Herein, a new strategy for using double network hydrogels as marine anticorrosion and antifouling coatings using of Cu2+ crosslinking and loading corrosion inhibitors used in the ...

Anti-fouling and self-cleaning The exceptional dual-repellent properties of the PKF-SiO 2 coating primarily originate from its ultralow interfacial adhesion characteristics at the ...

Highly transparent, durable, flexible and smooth coatings with excellent anti-fouling properties have broad applications on cars, windows, and touch screens. However, the ...

The superior anti-fouling ability of the superhydrophobic coating can be attributed to the liquid-repellent properties and extremely low interfacial force. The dynamic anti-fouling ...

Herein, a double-barrier and multi-functional membrane for emulsion separation was fabricated

via in-situ growth of MIL-88A on the Fe-phenolic network. This membrane performs ...

The air cushion between the hierarchical rough surface and the liquid contaminant plays a great role in avoiding the contamination of the coating. The excellent self-cleaning and ...

To eliminate the optical transparent barrier and realize the versatility of hydrophilic coatings, Zhang et al. prepared a polyvinyl alcohol (PVA)/SiO 2 coating via an ultrasonic ...

This distinctive advantage positions POSS as a valuable component in anti-corrosion and anti-fouling coatings. It is widely acknowledged that polymer nanocomposite ...

Currently, surface modification of blood-contacting medical devices primarily involves the construction of active or passive anti-fouling coatings. This review explores the ...

Hence, this review focus on five major antifouling mechanisms used in antifouling hydrogel: hydration layer, elastic modulus, antifoulant modification, micro/nanostructure and ...

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