High-altitude anti-corrosion of wind turbine blades

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Offshore wind turbines face relentless salt spray and high humidity. Protective coatings like epoxy-based paints or ceramic layers are applied to prevent salt-induced corrosion.

To make the superhydrophobic ice-phobic coating have excellent weather resistance in the actual operation of wind turbine blades, a method of adding self-cleaning, anti-corrosion, ...

Explore techniques and innovations in specialized coatings for wind turbine blades to enhance performance, longevity, and efficiency in renewable energy.

In order to simulate the icing situation in a high-altitude, low-temperature and high-humidity environment, the actual anti-icing performance of the coating was tested using a methyl blue...

Self-healing coatings, which autonomously or semi-autonomously restore barriers and mechanical function after damage, promise a paradigm shift in blade protection by combining ...

Superhydrophobic coatings are increasingly recognized as a promising approach to enhancing power generation efficiency and prolonging the operational lifespan of wind turbines.

In this study, decommissioned wind turbine (WT) blades were recycled using self-developed solid-state shearing milling (S 3 M) equipment. The recycled fine powder of WT blades ...

Due to the unique sandwich structure, the film has a high tensile strength and elongation at break, reaching 48.5 MPa and 795.0%, respectively. This work provides a simple approach to ...

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