

Special Issue

Hybrid Passive and Active Anti-icing Technologies for Mitigating Ice Accretion on Marine Structures

Message from the Guest Editors

In cold regions, marine structures such as ships, offshore platforms, and coastal infrastructure are often exposed to ice formation and accretion, which can lead to reduced efficiency, safety risks, and even structural damage. To mitigate these issues, various anti-icing technologies have been developed, including passive and active approaches. The development of effective anti-icing technologies is crucial for ensuring the safety and efficiency of marine operations in cold climate regions. By combining passive and active approaches and leveraging emerging technologies, researchers and engineers can continue to advance the field and improve the resilience of marine structures against ice accretion. The scope of this Special Issue will serve as a forum for papers in the following concepts:

- Passive anti-icing technologies;
- Active anti-icing technologies;
- Low ice adhesion surfaces;
- Mechanics of ice;
- Atmosphere icing;
- Sea spray icing;
- Remote sensing of ice;
- Icebreaker ships;
- Adhesion behavior of ice.

We look forward to receiving your contributions.

Guest Editors

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About the Journal

Message from the Editorial Board

Now more than ever, research is asked to deliver knowledge and technologies to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed in the spotlight of most contemporary research. Surface science and engineering play a key role in this regard, with an incredible potential in delivering new and deep scientific understanding and technical solutions essential to solve most of the major societal challenges.

Coatings is a well-established, peerreviewed, online journal dedicated to the vibrant field of surface science and engineering. Coatings publishes original research articles that report cutting-edge results and review papers that make the point on the hottest research topics.

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