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# **Biofouling and Antifouling**

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## **Message from the Guest Editors**

Biofouling is a natural and complex process of biological colonization that occurs on immersed surfaces, especially in marine environments. Beyond ship hulls, aquaculture, marine instrumentation or desalination plants, required antifouling strategies by now. Two main antifouling paints are used for preventing the colonization by marine organisms, especially on vessel hulls. The first type of biocidal antifouling is based on binders allowing a release control of biocides. The second one, known as Fouling Release Coating (FRC), is based on polydimethylsiloxane (PDMS) elastomers used as a binder combining low surface energy and low elastic modulus, allowing a detachment of fouling organisms by hydrodynamic forces during navigation. In order to improve efficacy and for limiting environmental impact, different new strategies are nowadays investigated: Self-stratified coating having amphiphilic surfaces, nanostructured surfaces through block copolymers, redox addressable polymers bearing electroactive pendent groups, biohydrolyzable polymers, hydrolyzable FRC, etc.

This Special Issue, "Biofouling and Antifouling" welcom research papers concerning:

- Elaboration of original polymers as binders for antifouling coatings, especially new strategies coupled to efficacy study;
- Unraveling the mechanism of action for original antifouling surfaces regarding colonization, from biofilms (microfouling) to macroorganisms (macrofouling).









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## **Editor-in-Chief**

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