



## New Prospects in Fire Retardant and Wood Protection Coatings

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### Message from the Guest Editors

Dear Colleagues,

Wood, as a natural and versatile material, has been utilized in construction and various industries for centuries. However, its inherent flammability and susceptibility to environmental degradation pose significant challenges. Flame retardants are chemical additives designed to inhibit or slow down the combustion process of materials. The use of fire retardants in wood and wood-based composite protection is particularly important in industries where fire safety is paramount.

This Special Issue aims to provide insight into the advancement of wood and wood-based products, with a specific focus on improving fire safety, multifunctional coating for wood protection, and sustainability in various applications towards the use bio-based chemicals.

In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the following:

- advanced fire-retardant additives;
- fire-retardant performance;
- multifunctional coatings;
- sustainable coating development;
- emerging applications;
- commercialization challenges.

We look forward to receiving your contributions.





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## 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.

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