Special Issue

Mechanical Properties and Surface Engineering for Pavement Materials and Asphalt Mixtures

Message from the Guest Editors

The performance and longevity of road pavements are critically dependent on the mechanical behavior and surface characteristics of the materials. In recent years, pavement engineering has witnessed rapid developments in novel materials, modified binders, functional additives, and advanced structural designs. This Special Issue is dedicated to showcasing the latest advances in mechanical performance and surface engineering related to pavement materials and asphalt mixtures. It will explore innovations in materials science and surface treatment for more durable, environmentally friendly, and smart pavements. The scope of this Special Issue includes:

- High-performance asphalt mixtures and binder modification;
- Surface treatments and coatings for pavements;
- Recycling technologies and reclaimed materials in road construction;
- Interface behavior and adhesion between asphalt, aggregates, and additives;
- Microstructure–property relationships in asphalt composites;
- Mechanical modeling and characterization for pavement systems;
- Durability enhancement for extreme environmental conditions;
- Smart pavement materials and multifunctional surface layers.

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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