

Special Issue

Advances in Sustainable Pavement and Road Construction: Innovations with Asphalt and Recycled Materials

Message from the Guest Editor

As the global construction sector moves toward more sustainable and resilient infrastructure, innovations in pavement materials and road construction methods are playing a critical role, which is why this Special Issue focuses on recent advancements in sustainable pavement technologies, with a particular emphasis on asphalt innovations and the integration of recycled materials. The use of reclaimed asphalt pavement (RAP), recycled plastic, rubber, industrial by-products, and other alternative materials not only reduces the environmental impact but also enhances the performance and longevity of road infrastructure. We invite original research articles, review papers, and case studies that explore the design, performance evaluation, and implementation of sustainable pavement systems. Topics of interest include, but are not limited to, novel asphalt binders, warm mix asphalt technologies, life cycle assessment (LCA), pavement recycling techniques, low-carbon construction practices, digital tools for pavement optimization, and the circular economy in road construction.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Current urban environments are home to multi-modal transit systems, extensive energy grids, a building stock, and integrated services. Sprawling neighborhoods are composed of buildings that accommodate living and working quarters. However, it is expected that the cities and communities of the future will face complex and enormous challenges, including maintenance, interconnectivity, resilience, energy efficiency, and sustainability issues, to name but a few. A smart city uses advanced technologies and a digital infrastructure to improve the outcomes in every aspect of a city's operations. A smart building optimizes the experience of occupants, staff, and management by using a modern and connected environment. Innovations in technology that can bring dramatic improvements to design, planning, and policy are critical in developing the cities and buildings of the future.

Editor-in-Chief

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