Special Issue

Materials, Structures and Designs for Durable Roads

Message from the Guest Editors

The smartness and resilience of infrastructure are becoming increasingly ubiquitous. As important components of infrastructure, roads play an important role in achieving the goal of the entire infrastructure system. To obtain this enhanced durability and sustainability, in the past few decades, certain smart admixtures have been developed to make this material more intelligent. Thermochromic materials have been used in asphalt due to the advantages of the dynamic conversion of optical and thermal properties, which reversibly change color according to temperature, thereby dynamically adjusting the reflectivity of the asphalt to solar radiation. Ultraviolet-blocking materials can enhance the anti-ultraviolet aging ability of asphalt. Induction heating is used to enhance the engineering healing ability of asphalt mixtures. Warm and cold mixing technologies can reduce greenhouse gas emissions, thereby saving energy. Recycling technology and regeneration technology play an important role in realizing long-life pavement structures. In this Special Issue, the latest developments in these smart and durable road surfaces are discussed.

Guest Editors

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. Materials provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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