Special Issue

Advances in Asphalt Materials

Message from the Guest Editor

The need to maximise the durability and safety of road pavements is widely recognized. The main aspects that lead to durability include improving asphalt properties and developing new types of asphalt materials for pavement construction. Special attention is paid to the environmental sustainability of asphalt pavement. One of the solutions is to modify asphalt by incorporating a range of materials, such as polymers, rubber wax, F-T synthetic wax, natural asphalt, or adding various chemical additives, especially low-viscosity ones. Effectiveness of these measures is assessed with increasingly advanced rheological tests of the binder, which are capable of predicting its behaviour over pavement service life. It is very important to develop and constantly improve new types of bituminous mixtures produced with binders modified with low-viscosity additives or zeolite-foamed asphalt at lower mixing and paving temperatures (Half-Warm Mix Asphalt). From a sustainability perspective, particularly relevant are the Half-Warm Mix Asphalt technologies that rely on water-foamed asphalt and enable mixture production at a temperature of about 100 °C.

Guest Editor

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Deadline for manuscript submissions

closed (10 January 2023)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
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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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