

Special Issue on **Innovative Materials, New Design Methods, and Advanced Characterization Techniques for Sustainable Asphalt Pavements**

CALL FOR PAPERS

Asphalt is considered as one of the existing sustainable materials that is used for constructing highway pavements. Asphalt material generally minimizes the impact on environment through the whole process from production to construction to maintenance. However, with the escalating costs and increasing demand on petroleum-derived products including asphalt material, the search for innovative materials from noncrude petroleum sources that are environmentally friendly materials continues to be crucial. The challenges that face asphalt paving technologists nowadays include producing new innovative materials and developing novel design methods for highway pavements capable of carrying the growing traffic loads, preserving the surrounding ecosystems, and meeting the human needs. Proper design procedures facilitate producing sustainable pavements. The mechanistic analysis to predict performance is a key step in the mechanistic-empirical pavement design guide. Advanced procedures and techniques are needed to characterize asphalt materials along with accurate models to analyze pavements for critical stresses and strains to obtain accurate measures for pavement performance and hence produce sustainable pavements.

The scope of the special issue is to come up with new innovative materials from noncrude petroleum sources, novel design procedures, and advanced techniques for mechanistic analysis and evaluation for producing sustainable asphalt pavements to carry the expanding traffic loads and restore the environment. We encourage research papers as well as state-of-the-art reviews in the special issue.

Potential topics include but are not limited to the following:

- ▶ Introducing new innovative materials for asphalt pavements
- ▶ Developing novel design methods for asphalt pavements
- ▶ Introducing advanced procedures for mechanistic analysis and evaluation
- ▶ Presenting nonpetroleum sources for materials used for asphalt paving mixtures
- ▶ Discussing the sustainability issue and the environmental effects of the new materials
- ▶ Evaluating life cycle costs of proposed materials

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/amse/imndm/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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