

Advances in Civil Engineering Materials

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Special Issue on New Frontiers in Materials Applications toward Sustainable Civil Infrastructures

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Editorial Objectives

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Contributions are peer reviewed prior to publication.

Purpose and Scope

The journal publishes high-quality, original papers on topics relating to the properties and performance of civil engineering materials. These are materials such as concrete, asphalt, steel, polymers and polymeric composites, and wood for use in civil and environmental engineering applications, such as pavements, bridges, buildings (including nonstructural elements such as insulation, and roofing), and environmental systems (including water treatment). The journal core topics are characterization, physical properties, constructability, and durability of these materials. Characterization may include chemical composition, nanostructure, and microstructure. Physical properties include strength, stiffness, and fracture behavior. Constructability includes such topics as construction methods, quality control and quality assurance, life cycle analysis, and sustainability. Durability may be determined using either field performance or accelerated laboratory testing. Papers relating to sustainability of engineering materials or to the impact of materials on sustainability of engineering structures are especially encouraged.

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Overview

Special Issue on New Frontiers in Materials Applications toward Sustainable Civil Infrastructures

Toward building sustainable and longer civil infrastructures, the engineering community around the globe continues undertaking research and development to improve existing design, modelling, and analytical capability. Ancient peoples built their structures to withstand the test of time. If we think in the same way, our current projects will be a heritage for future generations. Such initiatives are also enhanced by the ongoing research towards *Sustainable Civil Infrastructures*, of which the GeoMEast series of conferences is a part.

This themed issue includes 14 articles of selected full-length, peer-reviewed papers accepted for presentation at the GeoMEast 2017 International Conference. The articles present the latest research findings for different infrastructure disciplines such as: bridge construction, concrete admixture, transportation, pavement, seismic analysis, and railway crossings. Hopefully, this special issue can be used as good information package for researchers who are actively working in the area of sustainable civil infrastructures.

As a guest editor, I deeply appreciate all authors and reviewers who participated in this *Special Issue on New Frontiers in Materials Applications toward Sustainable Civil Infrastructures*. I believe that all the works that are presented in this special issue have a unique contribution and significance.

Finally, I would like to thank Profs. Leslie J. Struble and W. Jason Weiss. It was a great and enjoyable experience for me to work as a guest editor for ASTM. I am also thankful for the assistance provided by ASTM staff members, Alyssa Conaway and Sara Welliver. Without their help, this special issue could not have been organized as smoothly.

Hany Farouk Shehata
Guest Editor

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