

Special Issue

Microstructure, Mechanical Properties and Wear Performance of High-Strength Steels

Message from the Guest Editors

As concerns over low carbon emissions and fuel saving have become more prominent, the development of high/ultra-high strength steels is of great significance. The third generation of advanced high-strength steels, such as nano-structure bainite steel, Q&P steel and medium manganese steel, have been designed to provide an improved combination of strength and ductility and some are increasingly applied in industrial production. Investigations into the microstructure, mechanical properties and wear performance of high-strength steels have been widely conducted. However, advanced high-strength steels still face some challenges. For example, the improvement of mechanical properties normally requires the addition of expensive alloying elements. Going forward, research on the microstructure, mechanical properties and wear performance of high-strength steels should be intensified in order to maximize strength and ductility as well as wear performance and promote industrial production.

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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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