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Advanced High Strength Steels by Quenching and Partitioning

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Message from the Guest Editors

Quenched and partitioned (Q&P) steels are complex, sophisticated materials, with carefully selected chemical compositions and multiphase microstructures resulting from precisely controlled heating and cooling processes. The key treatment parameters include annealing temperature, quenching temperature, partitioning temperature and time. Manipulation with these parameters along with the steel chemistry leads to a variety of multiphase microstructures showing a wide range of properties.

For this Special Issue in *Metals,* we welcome research articles and reviews addressing theoretical and experimental design of steels and Q&P process, microstructure of Q&P treated steels, their mechanical and performance properties, Q&P process – microstructure – properties relationship, as well as examples of their industrial applications. The Special Issue is oriented to researchers from universities and industrial research centers and to steel producers directly involved in the production and product development.

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Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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