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# Thermomechanical Properties of Steel

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Deadline for manuscript submissions:
**closed (30 April 2021)**

## Message from the Guest Editor

Dear Colleagues,

In numerous branches of science, state-of-the-art materials are operated close to their application limits today. All attempts to combine sufficient creep strength and increased steam oxidation resistance in new FM steels at temperatures beyond 620 °C have failed so far. Furthermore, the transition of the generation sector towards regenerative power supply poses a lot of new challenges for structural high-temperature materials, because operation modes change from mainly base load to flexible residual load compensation operation, which leads to strongly increased demand for structural steels designed against fatigue damage.

This Special Issue is dedicated to the latest advances made in low-cost structural steels. These advances cover novel steel grades and processing techniques, microstructure and property determination, and possible applications in all fields of industry.

## Keywords

- alloy development
- processing
- heat treatment
- microstructure property relations
- mechanical properties
- fatigue
- thermomechanical fatigue

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## Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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