



metals



Special Issue Reprint

Material Modeling in Multiphysics Simulation

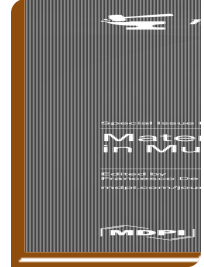
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Virtual prototyping techniques, generally based on numerical methods, are widely used in the process of designing an industrial product. In recent decades, the demand for strong improvements in terms of productivity, reliability, and cost reduction have been fundamental considerations in this form of design, often requiring more than one simultaneously occurring physical field (thermal, mechanical, electrical, metallurgical, etc.) to be taken into account. At present, a huge amount of commercial code and a huge number of new algorithms have been developed to perform multiphysics simulations; nevertheless, the availability of a suitable material model often presents a bottleneck in obtaining reliable results. This reprint brought together a series of recent scientific contributions addressing several topics in the field of the physical-based modeling of material behavior and manufacturing processes. The quality of scientific contributions in this reprint can aid scholars and scientists in their research activity.



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