Physical and Numerical Simulation of Materials Processing

Description: Selected, peer reviewed papers from the 5th International Conference on Physical and Numerical Simulation of Materials Processing, October 23-27, 2007, held in Zhengzhou, China

This specialist work comprises 249 peer-reviewed papers on the “Physical and Numerical Simulation of Materials Processing”.

Physical and numerical simulations make it possible for materials science to progress from the experience-based to the science-based, and from the qualitative to the quantitative. Physical simulations, which effectively reveal the fundamentals of the evolution of the structures and properties of materials save significant amounts of time and money. Meanwhile, numerical simulations make real the experimental “mission impossible” of achieving the full description and design of a material. Naturally, both types of simulation are gaining increasing worldwide attention, and will be prominent approaches exploited by materials researchers in the 21st century.

This collection brings the reader up-to-date with recent academic and experimental accomplishments in the fields of physical and numerical simulation.

Eds: Jitai NIU, Zuyan LIU, Cheng JIN and Guangtao Zhou

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