MATERIALS PROCESSING

CFD MODELING AND SIMULATION IN MATERIALS PROCESSING

This symposium deals with computational fluid dynamics (CFD) modeling and simulation of engineering processes. Papers are requested from researchers and engineers involved in the modeling of multiscale and multiphase phenomena in material processing systems. The symposium focuses on the CFD modeling and simulation of metal processes, including:

- Continuous casting of alloys
- Electromagnetic stirring (EMS) and ultrasonic cavitation and stirring (UST) processing
- Controlled solidification processes
- Casting, forging, welding, heat treating, and VAR/ESR/PAM/EBM remelting processes
- Manufacturing of advanced metal-matrix-composites and nanocomposites via controlled melting and solidification processing
- Powder metallurgy
- Coatings including PVD, CVD, and plasma-assisted EBM-PVD technologies
- Other surface and/or additive engineering processes including induction, ultrasonic, laser, and EB thermal processing

The symposium also deals with applications of CFD to engineering processes and demonstrates how CFD can help scientists and engineers to better understand the fundamentals of engineering processes.

ORGANIZERS

Laurentiu Nastac, The University of Alabama, USA Koulis Pericleous, University of Greenwich, Great Britain Adrian Sabau, Oak Ridge National Laboratory, USA Lifeng Zhang, University of Science and Technology Beijing, China Brian Thomas, Colorado School of Mines, USA

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