
Editorial

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Biographical notes: Jitai Niu is the Chairman of International Federation on Physical and Numerical Simulation of Materials Processing (IFPNS). He is the author/co-author of five books on physical simulation and welding, and has 27 patents to his credit. He received numerous honours and awards at national and ministerial levels of authority in China and is a foreign academician of Nature Science Academy of Russia.

Physical and numerical simulations make it possible for materials science to go from experience-based to science-based and from qualitative to quantitative understanding. Physical simulations, which effectively reveal the principles of materials' structure and properties evolutions, save time and money significantly, whereas numerical simulations enable the full description and design of various material processes, which are impossible experimentally. Naturally, both simulations are gaining attention worldwide and will be a prominent approach of materials research in the twenty-first century.

The International Conference on Physical and Numerical Simulations of Material Processing (ICPNS) is such a platform for timely exchange of the recent academic and experimental accomplishments in the field of physical and numerical simulations. The eighth conference (ICPNS' 2016), organised by International Federation on Physical and Numerical Simulation of Materials Processing, co-sponsored by DSI, USA, State Key Laboratory of Materials Processing and Die and Mould Technology, Huazhong University of Science and Technology, State Key Laboratory of Advanced Welding and Joining, Harbin Institute of Technology, Henan Polytechnic University, Southwest

University of Science and Technology, Collaborative Innovation Center of Non-ferrous Metals, Henan Province, The Advanced Materials Institute of Shandong Academy Science, China and hosted by Purdue University, USA, will be held in Seattle, WA, USA, from October 14 to 17, 2016. During the conference, more than 300 participants from 23 countries/regions will present their research papers. These contributed papers represent the frontier in the research field of physical and numerical simulations in materials processing.

This conference series, following the tradition of its seven predecessors in China and Finland, is first time held in America. I sincerely thank the sponsors and hosting universities for their efficient work as well as the support. I also would like to express my thanks to Prof. Dan Shechtman, a laureate of Nobel Prize, and other members of the International Scientific Committee as well as Prof. Qingyou Han and all the members of the Organising Committee with the Secretariat of the conference. Likewise, I owe lots of gratefulness to plenary speakers and invited speakers for their impressive speech to have set high academic standard for the conference. Finally, I wish to thank all participants from all over the world. It is your active participation that makes this conference successful.