Special Issue

Nanomanufacturing Empowered with Artificial Intelligence

Message from the Guest Editors

Over the past decades, artificial intelligence has become the hottest research topic that is gradually impacting almost all aspects of human life. As Moore's law indicates, the number of microchip transistors roughly doubles every two years. Throughout the past fifty years, technique improvements in nanomanufacturing have consistently added power to computers, which nurtures the growth of artificial intelligence (AI). Eventually, this year we witnessed the boom of ChatGPT. Such AI techniques will significantly impact science and technology and can potentially update our technology to a new level. The era of AI is coming, which may lead to the next Industrial Revolution. As artificial intelligence keeps growing every day, we think it is of great importance to discuss the impacts of AI on its soil, namely, nanomanufacturing. This Special Issue is designed to cover topics about nanomanufacturing techniques empowered with AI-related techniques. Topics include but are not limited to the following:

- Machine learning/deep learning methods applied in nanomanufacturing;
- Design of machine learning/deep learning algorithms for multiscale manufacturing.....

Guest Editors

Dr. Feng Cheng

Department of Electrical and Computer Engineering, Northeastern University, Boston, MA 02115, USA

Dr. Liang Pan

School of Mechanical Engineering, Purdue University, West Lafayette, IN 47907, USA

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Nanomanufacturing
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
nanomanufacturing@mdpi.com

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About the Journal

Message from the Editor-in-Chief

The capability to manipulate, assemble, and fabricate nano-objects have given rise to nanoscience, one of the most rich and interdisciplinary fields of research. In fact, mechanics, optics, magnetism, or electronics at the nanoscale strongly differ from their macroscopic counterparts, and thus several disciplines are necessary to study nanomaterials. This field's development parallels the technical advances that have made it possible to control matter at the nanoscale. Our journal, *Nanomanufacturing*, seeks to provide a forum for discussion and a platform to publish the latest results regarding the fabrication, manipulation, scalability, and eventual industrial production of miniaturized devices or objects. All of our articles are published with rigorous refereeing and open access.

Editor-in-Chief

Prof. Dr. Candido Fabrizio Pirri
1. Department of Applied Science and Technology, Politecnico di Torino, C.so Duca degli Abruzzi 24, 10129 Turin, Italy
2. Center for Sustainable Future Technologies, Italian Institute of Technology, Via Livorno 60, 10144 Turin, Italy

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