Foreword

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Welcome to “Nanomanufacturing and Metrology (N&M)”! This is a new international peer-reviewed research journal on the nanoscale manufacturing science and technology, which is launched in 2018 by the International Society for Nanomanufacturing (ISNM), Springer Nature, and also Tianjin University.

People are making and using electronic devices with single transistor size smaller than ever before. It is incredible how fast nanomanufacturing technologies are moving forward. For instance, the semiconductor manufacturing process was on a 10- μm scale in 1971, and has been continuously developed to today’s 10-nm class. Besides the better on-chip integration capability, the nanomanufacturing also allows for precise control over the composition and structure of nanomaterials, which holds vast possibilities in the fabrication of unique nano-devices with multi-functionalities.

Nanomanufacturing is an important branch of nanoscience for the production of nanoscale structures and devices. This research subject includes the fundamental studies on novel methods for “top-down” and “bottom-up” fabrication of large-scale, highly reproducible, and complex nanosystems, as well as the in-depth understanding of design principles, nanoscale phenomena and physical/chemical processes behind them. It has been a rapidly growing field during the past decade, and a high-profile journal is in great demand to address the issues above. It will benefit the further development of nanomanufacturing technologies, by encouraging researchers to share their

most recent breakthroughs on modeling, monitoring, controlling and evaluating the quality and performance of nanosystems.

To this end, N&M is released by ISNM and provides the community a full suite of options, including original articles, cutting-edge communications, timely review papers, technical reports, and case studies, to publish the exciting and important advances in all the aspects of nanomanufacturing and metrology. This new journal is focusing on the physics, chemistry, and material science occurring at the micro-, nano-, and atomic levels, and providing a dedicated forum for the research community in nanomanufacturing and nano-metrology.

Professor Fengzhou Fang, a leading expert in the nanomanufacturing research, is the editor-in-chief of N&M, who is also the Founding President of ISNM. Professor Fang has been well recognized worldwide since 1998, for his many significant contributions of new theories and methods in nanometric cutting and machining monocrystalline materials. Prof. Fang and members in the editorial board are the most active and productive researchers in the field of nanomanufacturing. Their expertise covers all the areas in nanomanufacturing and helps N&M become one of the representative journals in nanoscience.

Congratulations on this new coming journal! I sincerely hope and believe that Nanomanufacturing and Metrology will soon show its great impact and become the top journal in the nanomanufacturing field.

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