
Editorial

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Biographical notes: Mark J. Jackson is a Professor of Mechanical Engineering at the College of Technology of Purdue University, USA. His research interests include micromachining and the design of nanomachine tools. He was educated at Liverpool and Cambridge universities and is a Faculty Associate at the Birck Nanotechnology Center and the Center for Advanced Manufacturing at Purdue University, UK.

Waqar Ahmed is the Chair of Nanotechnology at the University of Ulster. His area of research is in chemical vapour deposition of thin film nanostructures especially nanocrystalline diamond. He was educated at the University of Salford and has held academic positions at the University of Northumbria and Manchester Metropolitan University, UK.

In the past ten years, significant advancements have been made in the development of thin film fabrication techniques. Advances in the development of thin films in recent years include physical vapour and chemical vapour deposition of micro and nanostructures, physical vapour deposition of thin films for functional coatings on cutting tools, thin film spraying of micro and nanocomponents, electroplating thin films, to name but a few. Therefore, the goal of this special issue of the *International Journal of Nanomanufacturing* is to publish the current state-of-the-art in thin film nanomanufacturing and to provide a forum for developing next generation thin film processes.

The papers presented in this issue are based on oral presentations made during the fifth International Surface Engineering Congress and Exposition held from 15 to 17 May 2006 at the Seattle Convention Centre at Seattle, Washington. At the Congress, a large

number of technical sessions (16), presentations (more than 65) and posters (25), were provided on a wide range of topics such as Thin Film Nanomanufacturing, Thin Films and Coatings, Failure Analysis of Thin Films, Mechanical Properties of Thin Films, Micro and Nanoscale Tribology, Thermal Spraying of Thin Films, Biomedical Applications and Environmentally Benign Nanomanufacturing. Although the conference proceedings contain many of the presentations (Proceedings of the 5th International Surface Engineering Congress and Exposition, Editors: M.J. Jackson and W. Ahmed, ASM International (2006), a selection of papers included in this special issue are specially extended versions of the conference presentations selected to represent advances in Thin Film Nanomanufacturing and are expected to enlighten readers of the *International Journal of Nanomanufacturing*. We are grateful to authors who contributed to this special issue. This papers presented in this special issue have been refereed by peer reviewers who are experts in their field and have returned their reviews in a timely fashion. We both wish to thank them for their reviews.

We also thank ASM International for providing us the opportunity to chair the International Surface Engineering Congress and Exposition, and we thank Professor Mohammed Dorgham, Editor-in-Chief of the *International Journal of Nanomanufacturing*, for publishing this special issue.