
Editorial

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Biographical notes: Mark J. Jackson is an Associate 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.

Waqar Ahmed is the Chair of Advanced Manufacturing and Nanotechnology at the University of Central Lancashire. 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.

Microgrinding and machining is a growing field where the latest developments in nanotechnology are being applied to great effect. This issue is a compilation of the recent developments in the areas of microgrinding and machining. The first set of papers deal with the analysis of cutting forces during the electrochemical grinding process and is followed by a study of surface quality in dry and wet ground cylindrical grinding processes. The experimental investigation into the machining characteristics of titanium is presented using the ultrasonic impact grinding process. A further paper describes the surface texture that is produced when grinding ceramic materials and also explains how the magnitude of frictional interactions changes the texture that is produced on the workpiece material. The effect of reduction lubricating coolants when grinding is also discussed in addition to how residual stresses in the few monolayers of the workpiece is affected by the lack of a cooling fluid. The final two papers focus on the use of nanostructured thin films on the performance in dry machining and on the use of titanium interlayers to enhance the grinding properties of synthetic diamond.

We thank the authors for their efforts to augment the contents of these papers. Each paper has been refereed by peer reviewers who are experts in their field. We wish to thank them for their efforts and insightful comments. Finally, we thank Professor Mohammed Dorgham, Editor-in-Chief of the *International Journal of Nanomanufacturing*, for publishing this Special Issue.